2/23/82 U 5930-1 (A)

Arkansas Business and Economic Review

A Publication of the University of Arkansas

Fall 1981

contents

Existing and Proposed User Fees on Arkansas' Rivers - A Preliminary Analysis

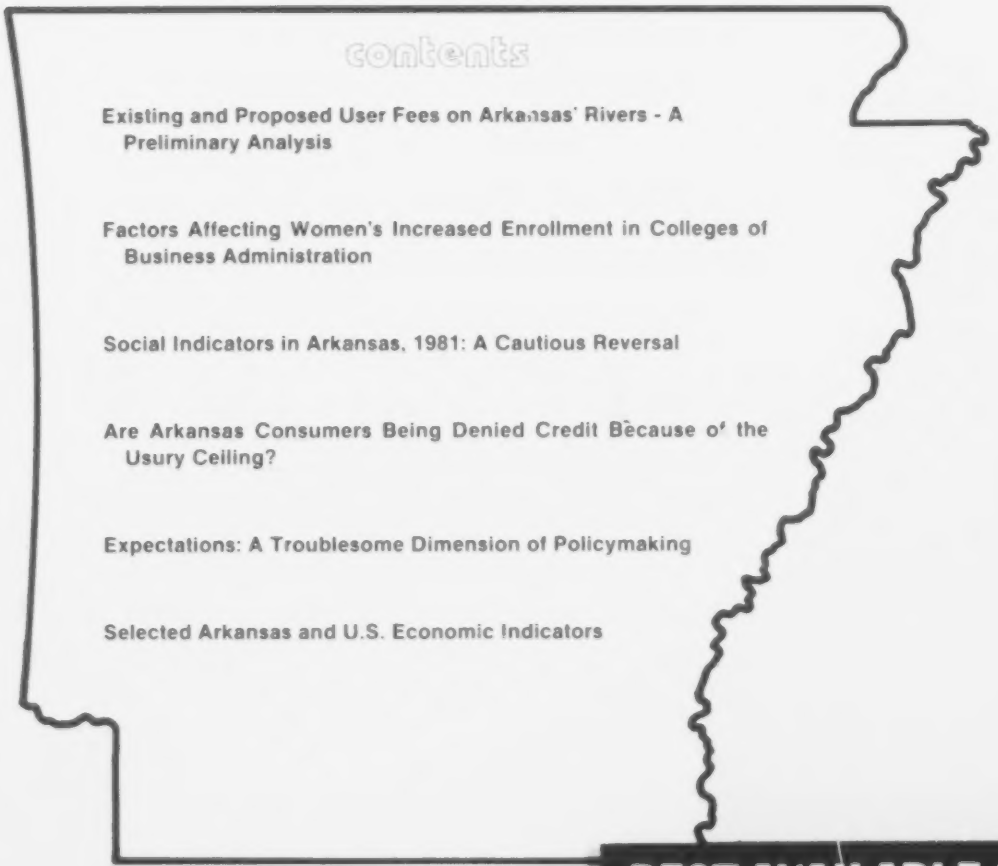
Factors Affecting Women's Increased Enrollment in Colleges of Business Administration

Social Indicators in Arkansas, 1981: A Cautious Reversal

Are Arkansas Consumers Being Denied Credit Because of the Usury Ceiling?

Expectations: A Troublesome Dimension of Policymaking

Selected Arkansas and U.S. Economic Indicators



BEST AVAILABLE COPY

Arkansas Business and Economic Review

JOHN P. OWEN
Dean, College of Business Administration

PHILLIP H. TAYLOR
Director, Bureau of Business and Economic Research

JOSEPH A. ZIEGLER
Senior Research Associate

HARRY FRENCH
Associate Economist

MARY R. MILLER
Research Analyst

HELEN MCGREW
DANA WARD
Research Assistants

WILLIAM FLYNN
Office Manager

SHERRYL E. LAUBACH
Compositor

LISA M. SADLER
Secretary

QUINTON GEANS
Office Assistant

The *Arkansas Business and Economic Review* is published quarterly by the College of Business Administration as a public service and mailed on request without charge to addresses in the U.S. The articles published do not necessarily represent points of view of the Editor or the University.

The College of Business Administration is fully accredited by the American Assembly of Collegiate Schools of Business. The Bureau of Business and Economic Research is a member of the Association for University Business and Economic Research and The Travel Research Association.

The cover design was created by Printing Services, University of Arkansas.

Reprints of *Review* articles are available from the Bureau at a rate of $1.00 for the first copy and 50 cents for each additional copy.

NOTICE

Individuals wishing to be added to the mailing list should send name, address and zip code to the Bureau of Business and Economic Research. If you are moving and wish to continue to receive the *Arkansas Business and Economic Review*, please send us the address label and your new address.

TABLE OF CONTENTS

Volume 14 Number 3 FALL 1981

PAGE

Existing and Proposed User Fees on Arkansas' Rivers–A Preliminary Analysis 1

Grant M. Davis
Professor, Oren Harris Chair of Transportation
University of Arkansas, Fayetteville

Factors Affecting Women's Increased Enrollment in Colleges of Business Administration 6

Elizabeth M. Crocker
Assistant Professor of Accounting
University of Arkansas, Fayetteville

Ann R. Henry
Assistant Professor of Accounting
University of Arkansas, Fayetteville

Social Indicators in Arkansas, 1981: A Cautious Reversal 11

William R. Darden
R. A. Young, Distinguished Professor
of Business Administration
University of Arkansas, Fayetteville

Donna K. Darden
Assistant Professor of Sociology
University of Arkansas, Fayetteville

E. W. Boatwright
Director, Arkansas Household
Research Panel
University of Arkansas, Fayetteville

Are Arkansas Consumers Being Denied Credit Because of the Usury Ceiling? 18

Joseph W. Wilson
Assistant Professor of Finance
University of Arkansas, Fayetteville

Cameron E. Williams
Instructor of Marketing
University of Arkansas, Fayetteville

PAGE

Expectations: A Troublesome Dimension of Policymaking 21

Thomas R. McKinnon
Director, Bessie B. Moore Center
for Economic Education
University of Arkansas, Fayetteville

Selected Arkansas and U.S. Economic Indicators 23

REVIEW EDITORAL POLICY STATEMENT

In an effort to ensure that the articles appearing in the *Review* meet standards consistent with the goals of the College of Business Administration and of the University of Arkansas, an Editoral Advisory Board has been created to referee manuscripts submitted for publication. The current members of the Board are:

Jack E. Adams, University of Arkansas, Little Rock
Phillip W. Balsmeier, Louisiana Tech University
Michael W. Butler, University of North Alabama
G. James Francis, Colorado State University
David E. R. Gay, University of Arkansas, Fayetteville
John Kane, University of Arkansas, Fayetteville
Dale A. Level, University of Arkansas, Fayetteville
Harvey Lewis, University of Mississippi
John E. McCain, University of Arkansas, Fayetteville
James Millar, University of Arkansas, Fayetteville
C. P. Rao, University of Arkansas, Fayetteville
Eugene Sauls, California State University–Chico
Lloyd Seaton, Jr., University of Arkansas, Fayetteville
Donald White, University of Arkansas, Fayetteville
Joseph Ziegler, University of Arkansas, Fayetteville

The *Arkansas Business and Economic Review* is dedicated to information relevant to the business and economic environment of Arkansas. Manuscripts are solicited in these general subject areas:

1. Problems and issues of the Arkansas business community and economy;

2. Regional and industrial problems that have implications for the Arkansas economic community;

3. National business and economic issues of general interest to the people of Arkansas; and

4. Business and economic theory.

As a minimum, to be accepted for publication a manuscript must have literary value and the research upon which it is premised must have been conducted in a scientifically valid manner. Thereafter, the order of enumeration of the subject areas designates the system of priorities that will be applied in ascertaining the publishability of a manuscript. (However, the system of priorities will not be applied in such a way as to completely exclude any of the four categories of articles.)

Form requirements for manuscripts include double spaced originals with each chart or graph prepared in ink (camera ready) on a separate sheet. Manuscripts and all inquiries should be addressed to Editor, *Arkansas Business and Economic Review*, Bureau of Business and Economic Research, College of Business Administration, University of Arkansas, Fayetteville, Arkansas 72701, Telephone (501) 575-4151.

ERRATA

With reference to John Thanopoulos' article "Personal Income and Transfer Payments in Arkansas" in the Summer 1981 issue of the *Arkansas Business and Economic Review*, the map, Illustration 3 entitled "Ratio of Transfer Payments to Personal Income," page 15, depicts incorrectly the status of the following counties which are listed alphabetically:

Crawford
Cross
Hempstead
Logan
Ouachita
Perry
Pike
Poinsett
Polk
Prairie
Pulaski

The information contained in Table 3 entitled "Arkansas Counties: Rank Ordered by Total Transfer Payments/Personal Income (1979)," page 16, is correct.

EXISTING AND PROPOSED USER FEES ON ARKANSAS' RIVERS — A PRELIMINARY ANALYSIS

Grant M. Davis
Professor, Oren Harris Chair of Transportation
University of Arkansas, Fayetteville

River transportation has played an important role in the historical development of Arkansas.[1] Following a hiatus of several decades, inland navigation activities accelerated in the central and western regions of the state with the completion of the McClellan-Kerr Navigation System. Increased traffic has likewise been reported on the White, Ouachita, and Red River systems with additional navigational capacity anticipated in the near future.[2] Indeed, maritime transport growth on the Arkansas inland streams has opened new markets and provided state shippers with modal choices and corollary increases in private investment and employment through new and existing shippers using the inland waterway systems.[3]

Unfortunately, a public policy debate has developed over inordinately high user fees that may well result in seriously diminishing the anticipated growth and in even threatening the very existence of Arkansas' primary navigation system. In 1978, Congress enacted the Inland Waterways Revenue Act which dictated a navigation user fee of 10¢ per gallon on fuel consumed by commercial barge lines using inland navigation systems. That fee is to be implemented incrementally with a 10¢ per gallon tax being collected in fiscal year 1984.[4]

The present administration and several federal legislators perceive the present navigation user fee to be inadequate regarding costs actually expended by government for construction and maintenance outlays of our inland waterways system. Certain members of Congress presently share this perception and have introduced legislation providing for a capital recovery fee aggregating 90 percent of virtually all costs.[5] Those fees, to be collected in the form of user fees on each gallon of fuel consumed, will apply to all traffic on certain inland water systems. Arkansas rivers, of course, are to be included within the scope of those legislative proposals. Enactment of the proposals will result in almost, if not absolutely, prohibitive fees for maritime transport in Arkansas and, in all likelihood, will curtail maritime traffic on the Arkansas, White, and Ouachita Rivers substantially if not totally.

The primary purpose of this paper is to: (1) examine the magnitude of federal maritime investment in Arkansas; (2) examine the proposed maritime user fees and their salient features; (3) examine government policy and user fees; and (4) proffer possible consequences of inordinately high navigation fees on Arkansas' internal river systems.

MAGNITUDE OF CAPITAL INVESTMENTS IN ARKANSAS' NAVIGATION SYSTEMS

Every economy is confronted with certain crucial yet fundamental economic decisions. One such of these decisions regards savings and investments. A society may consume all of its productive output or save some portion for real investment in future production. Capital outlays for transportation projects such as airways, highways, and waterways are physical investments and contribute both directly and indirectly to regional economic growth and the resultant evolution of a region's given infrastructure. To the extent that economic efficiency is desired in public investment policy, a user fee under some circumstances can certainly be justified.[6]

But, user fees for massive public investment encounters serious problems regarding the size and magnitude of the ultimate fee to be levied. In highway transportation, for example, user fees are assessed in a multiplicity of fashions, e.g., license fees, registration fees, and gasoline taxes. This same observation holds true for aviation where landing fees are assessed and fuel and tickets are taxed. Those particular fees are correlated with actual physical utilization of a specific public facility and normally are correlated with use although precise cost responsibility allocations are controversial.

Public investments in waterways projects are compounded by several factors. First, competitive interest exists from other modes who desire to tax away any advantage (real or subsidized) maritime carriers may possess, and one mode (rail) has recently initiated a comprehensive public relations campaign to accomplish this objective.[7] Second, political factors are currently working to reduce federal investments;[8] hence fiscal policy constitutes an integral portion of any federal investment decision. Third and last, inland waterway investments are multipurpose in nature and therefore compound traditional methods for allocating precise cost responsibility to any given facet of a given project.

Inland waterway investments are basically multidimensional in nature and as such are designed to provide or facilitate a variety of functions. Government investments in the McClellan-Kerr Navigation System, for example, are multipurpose in both scope and magnitude. Flood control, the generation of hydroelectric power, recreation, water supply, and navigation were integrated into the federal investment decision process. Obvious benefits for these various uses of the facility fluctuates almost daily and hourly. Historically, no intensive effort was expended to measure precisely the benefits and costs represented by the interrelated or amalgamated functions.[9]

Senate Bill 810, however, proposes levying a user fee that is structured to recapture 100 percent of capital expenditures on inland waterways systems over a 15-year period and 90 percent of maintenance outlays.[10] Ostensibly, the user fee, if enacted as drafted, would be of such proportions that water transportation would be, for all practical purposes, terminated on all of the waterway systems where the fee is imposed, an apparent observation because of the segment dimensions of the proposed bill. Table I illustrates the relative magnitude of direct federal investments and maintenance outlays for the navigation systems that are in Arkansas. As depicted, aggregate outlays between fiscal years 1976 and 1979 exceeded $1.1 billion for both construction and maintenance. For the Arkansas River Basin alone, maintenance outlays increased from $30 to 32.6 million during this interval of time.

SHIPPER INVESTMENTS

Direct outlays by federal and state governments for inland maritime transportation, while substantial, are not all inclusive. That is to say, public and private expenditures are incurred for slack water ports, manufacturing plants, transshipment facilities, and even intermodal terminals.[11] These sizeable outlays contribute to the general development of the infrastructure in addition to providing employment, tax contributions, and stimulation of economic activities. Given the inelastic supply of land, property values and related taxes tend to appreciate in financial terms.[12] Firms will shift the incidence of these fees if possible and the ultimate burden of the tax will not be evenly distributed.

Businesses generally select industrial sites for a variety of reasons. Empirical evidence, however, suggests that firms will normally locate where aggregate transportation costs are minimized.[13] Certain commodities such as aggregate and bulk goods display a natural tendency to be moved by water transport,[14] and hence water transportation has traditionally provided an energy efficient and relatively inexpensive mode for these types of goods. Slower speed and increased inventory investment requirements on the part of consignees and consignors are frequently reflected in lower rates. In a general sense, industrial shippers by water benefit from water transport where service is available.

As a relatively new navigation system, the McClellan-Kerr system has experienced increases in traffic during the past ten years from industry's commencing extensive use of that waterway. Also, several river ports have developed and expanded service to substantial geographical areas by combining water and land transport modes. Albeit transport benefits are incorporated in calculated cost benefits, they too are influenced by public policy. Even though the actual dollar size of this investment is not totally definitive, some authorities estimate indirect investments range from $50 to 100 million in the Arkansas River alone.[15] Tax revenue and property appreciation are also substantial for these private sector investments.

Corollary benefits, of course, include essential transportation alternatives to shippers and infrastructure evolution. When searching for future production and distribution locations, firms seek modal alternatives, and inordinately high user fees on rivers will certainly diminish the maritime alternative and hence the natural economic evolution of given areas.

S.810 AND THE ARKANSAS STREAMS

Senate Bill 810 provides for the imposition of a capital recovery fee predicated on a 15-year depreciable life

Table 1

CONSTRUCTION AND MAINTENANCE COSTS
(Dollars)

	1976	1977	1978	1979	Total
Mississippi & Tributaries					
Construction	221,611,144	145,472,811	174,524,955	161,036,108	702,645,018
90% of Maintenance	56,784,640	58,535,673	50,554,078	58,819,594	224,693,986
Ouachita & Black Below Camden (9' new project)					
Construction	10,165,847	6,058,264	7,465,608	18,588,719	42,278,438
90% of Maintenance	—	—	—	—	—
White River Basin (Little Rock District)					
Construction	492,510	291,453	941,168	672,942	2,398,073
90% of Maintenance	11,202,028	10,021,130	10,200,583	11,698,985	43,122,726
Red River Below Fulton					
Construction	—	—	—	—	—
90% of Maintenance	7,947	41,197	11,482	317	60,943
Dardenelle Lock & Dam (#10)					
Construction	50,096	57,822	—	6,110	114,028
90% of Maintenance	2,249,192	2,019,704	1,852,761	2,081,142	8,202,800
Arkansas River Basin–Ark., Okla., Kansas (Dams & Navigation)					
Construction	10,644,710	5,356,075	4,907,070	3,699,197	24,607,052
90% of Maintenance	30,455,941	27,075,143	29,034,073	29,400,358	115,965,514
TOTAL CONSTRUCTION	242,964,407	157,236,425	187,838,801	184,003,076	772,042,709
TOTAL 90% OF MAINTENANCE	100,699,748	97,692,847	91,652,977	102,000,396	392,045,968
TOTAL	343,664,155	254,929,272	279,491,778	286,003,472	1,164,088,677

of all new maritime investments on navigable streams with a draft of 14 feet or less. For all practical purposes, this definition encompasses all navigable streams in Arkansas. The legislative proposal also contains provisions for the proposed fee to recapture 90 percent of all maintenance and repair outlays for navigation usage of these streams.

That proposal appears patently equitable to all modes until carefully analyzed. Several basic arguments result from S.810. First, most Arkansas streams and subsequent investments are multipurpose in nature and, as such, specific allocation of cost responsibility to navigation presupposes a level of sophistication and accuracy in cost accounting that simply does not exist at this time. Second, a somewhat arbitrary 15-year depreciation period for a long-term capital investment such as a lock and dam will result in annual amortization costs that bear no relation to actual asset life. Third and last, the federal government lacks a pellucid national policy regarding maritime transport and user charges.[16] These three significant factors alone should demand detailed congressional examination of S.810.

Although Pareto optimality is a highly desirable objective in both the public and private sectors of our economy, the lack of a definitive maritime policy and user fees likewise proffers two additional inquiries that should be advanced. First, because of traditional rate parity relationships between rail and water transportation, a cogent argument can be made that rail rates will likewise increase with accelerated water prices.[17] Second, and more important, are user charges designed to accomplish specific objectives such as to allocate lockage utilization rates or to repay the government for a public investment? A satisfactory answer to this question is essential because unless capacity utilization problems exist on waterways and therefore can be allocated, the application of marginal cost pricing for rationing purposes is difficult to justify.

CONCLUSIONS AND RECOMMENDATIONS

Congressional enactment of S.810 will unequivocally levy a detrimental impact on the commercial transportation features of rivers in Arkansas. In this regard, an inordinately high user charge will reduce or eliminate for-hire water transportation on shallow-depth streams such as the Arkansas and White, and diminish growth on shallow-depth streams such as the Arkansas and White as well as diminish growth on the Mississippi River. Conceivable outcomes of this legislation are curtailment of employment, taxes, and income from maritime related firms in the state.

This paper has briefly examined the basic provisions of S.810 and presented the controversial aspects of user charges for maritime projects. While no one appears to take offense to the concept of user charges for private usage of publicly provided facilities such as airways, and highways, the relative size of cost responsibilities, however, generates considerable controversy. Cost assignment in maritime projects is contentious and compounded by two interrelated factors. First, waterway navigation projects are multipurpose in scope and nature, and, as such, accurate cost responsibility is virtually impossible. Second, waterway development is a vital component of regional infrastructure development which in turn intensifies its "free good" features.

Inland water transportation has benefited economic development in the state of Arkansas. An arbitrary user charge of exceptional proportions will restrict economic growth and development. More importantly, however, user charges for private use of publicly provided facilities need to be developed in conjunction with a national transportation policy designed to achieve definitive national goals, not merely equalize competitive conditions between the modes of transportation.

FOOTNOTES

[1]*Annual Report: 1980,* Arkansas Waterway Commission, Little Rock, Arkansas.

[2]Compiled from U.S. Army Corps of Engineers, *Waterborne Commerce in the U.S.,* (Washington, D.C. U.S. Army Corps of Engineers, 1979).

[3]Supra, note 1.

[4]*Inland Waterways Revenue Act of 1978.* As enacted, this law provided for the user fees to be levied only on navigation on navigable streams. But, the fuel impact also applies to all commercial traffic on inland waterways.

[5]S.810 and 809. Both proposals provide for user imposts on navigable streams and in deep water ports.

[6]For an erudite examination of federal user fees and public policy, consult D. Philip Locklin, *Economics of Transportation,* (7th ed.; Homewood, Illinois: Richard D. Irwin, Inc., 1978), chapter 23.

[7]See my recent publication issued by the Association of American Railroads that deals specifically with intermodal competition, energy, and taxes.

[8]Federal promotional activities and hence investment in transport facilities are an integral part of fiscal policy and as such become polemical issues in the budgeting process. The Reagan administration's efforts to reduce federal expenditures are designed to reduce federal maritime investments substantially.

[9]See Eastman, *Federal Aids to Transportation,* (Washington, D.C.: U.S. Government Printing Office, 1933). Also, consult Grant M. Davis, *The Department of Transportation,* (Lexington, Mass.: D.C. Heath & Co., 1970), chapters 1-2.

[10]S.810 Also contains a segmented levy based on river depth. In this regard, lower rivers (from a navigational perspective) such as the McClellan-Kerr system will be assessed a substantially higher fee than traffic on the lower Mississippi.

[11]The precise magnitude of private investment on the McClellan-Kerr system in Arkansas is unknown at this time. Various maritime and shipping executives estimate these expenditures to exceed $85 million in port and slack water facilities.

[12]Under property tax reassessment activities currently underway in Arkansas, ad valorem value of some maritime related activities may appreciate materially.

[13]Grant M. Davis and Stephen W. Brown, *Logistics Management*, (Lexington, Mass.: D.C. Heath & Co., 1974), chapter 7.

[14]Consult U.S. Department of Transportation, *Census of Transportation*, (Washington, D.C.: U.S. Government Printing Office, 1973).

[15]Supra, note 11.

[16]For an in-depth analysis of the opaque features of the U.S. transport policy, see Grant M. Davis and Jack J. Holder, Jr., "Does the United States Have a Cohesive National Transportation Policy?–An Analysis," *ICC Practitioners' Journal*, Vol. XXXXI, No. 3 (March-April, 1974), pp. 332-349.

[17]Railroad rates have historically been established on a parity basis when confronting water competition for traffic. If water rates increase because of the user fee, railroads will in all probability increase their rates to maintain the parity relationship.

FACTORS AFFECTING WOMEN'S INCREASED ENROLLMENT IN COLLEGES OF BUSINESS ADMINISTRATION

Elizabeth M. Crocker
Assistant Professor of Accounting
University of Arkansas, Fayetteville

Ann R. Henry
Assistant Professor of Accounting
University of Arkansas, Fayetteville

College-bound women's career interests appear to be shifting away from traditionally female fields to male-dominated ones at a rate that suggests women may reach parity with men in those fields much more quickly than previously anticipated.[1]

For the sixth year in a row, the number of women taking the Scholastic Aptitude Test exceeded that of men. Business and commerce was the most popular curricular choice among all high school seniors (18.6%). For the first time ever, more women (18.8%) than men (18.5%) are interested in business and commerce as an intended field of study. Those facts come from a report issued by the College Entrance Examination Board entitled "College-Bound Senior, 1980." The seniors taking the SAT test in 1980 represented only a third of all that year's high school graduates but that third, based on past experience, also represented approximately two thirds of all the new graduates who would enter college directly after high school.

Not only are more women entering college, the College Board study also indicated that they are entering traditionally male-dominated fields in ever increasing numbers. In the leading areas of intended study, only the health and medical area with a higher percentage of female respondents (19.5%) and engineering with a slightly higher percentage of males (20.4%) claimed more students than business and commerce.[2]

The rise in enrollment of females represents a trend which has been documented in several different studies. One writer reports that, for the period 1971-1975, numerical male enrollments in the American Assembly of Collegiate Schools of Business increased 32 percent while numerical female enrollments rose 193 percent. During that same period, female enrollment rose from 13 to 24 percent of the total business enrollment. Predictions have been made that, if the trend continues, the male-female ratio in Schools of Business would be fairly even within a decade.[3]

The University of Arkansas College of Business Administration enrollment had a fairly constant mix at 82 and 18 percent for males and females, respectively, until 1973 when the percentage of women increased to 23 percent. From 1973 to the present, female enrollment

rose at a higher rate than that of males to reach the present 37 percent of the total enrollment.[4]

WHY INCREASES IN BUSINESS SCHOOLS GENERALLY?

Historically, college enrollees, as opposed to individuals not attending college, have looked forward to obtaining jobs which paid a higher starting salary and also provided greater job opportunities over their lifetimes. However, since about 1969 the traditional reasons for obtaining a college education have not always held true. Many college graduates found that there were no opportunities in what had been previously open fields. Others found that their college degrees did not always provide them with sufficient occupational skills to support themselves in the manner that they had intended. In either event, college graduates often found themselves working at jobs which did not require a college education. Moreover, the dramatic overall 121 percent rise in college enrollments from 1960 to 1970 helped to create a glut in some markets and, following the laws of supply and demand, the starting salaries of college graduates declined in relation to starting salaries of jobs not requiring college degrees. College of Business graduates were among the exceptions. Indications are that business majors, with their special skills, will continue to find a ready market for their skills for at least several years.[5]

FACTORS BEHIND WOMEN'S INCREASED ENROLLMENT

In the 1960's, several factors coalesced to change the expectations of women in our society. In January of 1962, Arthur Fleming, Secretary of the U.S. Department of Health, Education, and Welfare, published, as a contributing editor to *Good Housekeeping*, an article which was entitled, "Oh, If I could Only Get a Job." His message was that the number of trained women workers must increase 25 percent by 1970 as compared with 15 percent for men in order to capitalize on our opportunities for economic growth.[6]

In 1963, Betty Friedan published *The Feminine Mystique* which resulted from interviews with Smith College graduates; this book exposed the gap between the mythological social ideal of women perpetuated by society and the living out of that reality in countless homes. Her message in publicizing the book to college students and graduates was simply, "The only way for a woman, as for a man, to find herself, to know herself as a person, is by creative work of her own."[7]

"Thus, in the early 1960's, educated women received the very same advice from two very different sources: whether for reasons of personal fulfillment (as in Friedan) or for public well-being (as in Fleming), they were to join the work force."[8]

In 1964 while Congress was debating Title VII of the Civil Rights Act to outlaw racially discriminatory hiring practices, a Virginia representative, to illustrate to his colleagues how ridiculous and unnecessary he thought the legislation was, added the word "sex" to the list of personal attributes which constitute the basis for discriminatory practice. The Johnson administration was determined to have the act passed, therefore, when Representative Martha Griffiths and Senator Margaret Chase Smith said they would oppose the Act if the word "sex" were removed, the administration forces agreed to use their strength to keep it in. (This is one of the few instances in which legislation was enacted preceding the majority constituent demand.)

However, once passed, there was no enforcement through the Equal Employment Opportunity Commission, the enforcement arm of Title VII. It took a combination of publications derived through new insights from psychological data regarding gender differences, social expectations, and female sexuality as well as the mass media popularization of these ideas before a constituent pressure was created by women who were living with and experiencing inequities. All these challenges to traditional sex-role assumptions coupled with the widespread use of stories nationally by print and television media helped create a change in ideology and expectation regarding women in society. But if women in the 1960's, upon becoming aware that their status could be changed, expected immediate change, they were disappointed because change has been slow to occur.

By the middle of the 1970's, women represented approximately 40 percent of the employed work force in the country. Their numbers had doubled since 1950; however, statistical comparisons indicated that their employment in the areas of management and administration had not been significant. For example, in 1970, women accounted for only 16.5 percent of the nonfarm managers and administrators while, in 1950 with only half that number of women employed, they had accounted for 13.5 percent of workers in the managerial and administrative areas. By 1976 women held 19 percent of the managerial and administrative positions, approximately a 3.5 percent increase in six years as compared to a 3 percent increase between 1950 and 1970. However, 20 percent of those in so-called managerial positions were either self-employed or unpaid family workers, thus significantly reducing the actual proportion of women in managerial positions. Although failure to employ women in managerial positions in proportion to their representation in the labor force as a whole can be attributed to other factors than education qualifications, it has been frequently suggested that the

supply of women with the minimum requirement for a managerial position—a college degree or at least some college—was not large enough to achieve so-called full utilization. Women have entered the traditionally male-dominated Schools of Business only recently; so they have received relatively few of the degrees granted, even though the overall number of women attending college and earning degrees has increased steadily during the past 25 years.[10]

The 1960's were times when there appeared to be pressure exerted by the federal government to use legislation to bring about positive changes in the status of women. By the early 1970's that pressure was exerted to bring about changes in higher education. In 1972 Congress amended Title VII to include colleges and universities in the jurisdiction of EEOC enforcement. By 1974, when the guidelines to implement the 1972 amendments were issued, it had become apparent to university administrators that the federal government was using its power to combat sexism in higher education.[11] Whether such legislation was necessary to assist in bringing about changes may be questioned by some; however, it was not until 1963 that Harvard even admitted women to their Masters in Business Administration program. Ten years later, the class of 1973 had 5 percent women enrollees. By the fall of 1978, 20 percent of the incoming MBA enrollees were women.[12]

Ten years ago Congress enacted changes in laws which affected educational institutions and businesses and encouraged them to remove barriers set up against women in traditionally male-dominated fields. Today's woman college student, a third grader ten years ago, has found the door to business ostensibly open.

FACTORS INFLUENCING OVERALL INCREASE

To determine factors perceived by men and women as contributing to enrollment and to determine any differences by sex in reasons for the increased enrollments of men and women, the authors constructed a survey designed to assess attitudinal factors of those already enrolled at the University of Arkansas. In designing the survey, care was taken not to suggest a particular response. The format of the survey consisted of personal data: sex, age, marital status, academic level, income, and academic standing. Students were asked to rate the significance of factors possibly contributing to student enrollment in the College of Business Administration on a five-point Likert scale. Students, on a similar scale, also rated factors affecting both the securing of a position and upward mobility in business. Instructors in business core courses administered the surveys. Responses were obtained from 419 students.[13]

RESEARCH FINDINGS

Initially, correlation analysis revealed possible significantly different responses as a function of sex. Each suspected significant factor was subjected to chi-square analysis to reveal whether the corresponding questionnaire responses were distributed differently among females and males.

In analyzing the factors of the survey which were proposed as relating to enrollment in the College of Business Administration very little difference was found in the mean responses of both men and of women. The mean responses were separated in order to determine if they significantly differed on the basis of sex. The most significant response factor for men and women was the perception that many job possibilities for the future would result from college-of-business enrollment. Students indicated they felt little worry or concern about their futures in relation to work. Also considered significant were the beliefs that a broader variety of opportunities is available to the student (personally) in business than in other fields and that students anticipated the ability to have upward mobility in business.

Students also indicated that money was a significant consideration. Indicated significant factors were: "A better opportunity to obtain a job that pays well," "the money I can make in business is sufficient for my money needs for the lifestyle I desire," and "the financial rewards of a career in business are in general better than in other fields requiring comparable educational preparation."

A third major category of significant response following the number one factor of job opportunities and the number two factor of monetary opportunities was a category indicative of personal considerations. Students indicated that they desired to acquire job skills which they could use in a working career over the remainder of their lives, that they felt they personally had the kinds of qualities to do well in business, that the work in the field of business seemed more appropriate to them, and that they felt they had a personal aptitude for business.

Rated somewhat below the above factors, but still viewed as contributory-to-significant factors were several which could be categorized as somewhat lesser considerations in the three broad categories of job opportunities, monetary opportunities, and personal considerations. Students felt that in business they would be able to compete for job roles that they would not have as good an opportunity in obtaining in other fields and that the high demand in industry for their skills would not only positively affect their securing a position in business but also positively affect their upward mobility in business. They felt that if they performed as well as

anybody else, they would receive equivalent rewards in terms of job advancement and pay in business and that they would enter jobs in business at higher salary levels than jobs outside of business requiring equivalent educational training. On a personal level, students indicated that business would provide opportunities to use a variety of their skills and talents and that it would also provide them with an opportunity for independence and freedom in work. They chose business to learn new skills and felt that they would personally fit in with other people in business.

At the other end of the spectrum, both men and women indicated the least significant factor in their being business students was that they were members of a minority group and believed they would have a better opportunity to succeed in business than in other fields. Also seen as insignificant were the factors suggesting their encountering less prejudice or discrimination in business than in other fields. Two questions were designed to determine if they were aware of changes or differences in laws and societal attitudes and both of these questions were perceived by them as insignificant-to-neutral factors. In addition, the influence of neither parents, teachers and counselors, nor close family friends was indicated as a significant motivating factor.

Among the fifty factors the students were asked to rate, the greatest difference in mean responses of men and women was in exposure to business courses in high schools where women rated the factor higher than men with men indicating an effect slightly above neutral and women indicating an effect somewhat less than contributory.

In further analyzing the factors that were attributed to be significant, the greatest differences in the mean responses of the sexes was found in three factors, all of which women rated as more significant than men. These included the belief that there are more job opportunities in business, that the student would have a better opportunity to obtain a job that pays well, and that the job that could be obtained outside of business with equivalent educational training would pay less initially than the job they could get in business. Men were more likely to anticipate an opportunity for an easier job than women. The father's example and satisfaction in business was more likely than that of the mother to influence both men and women with a further indication that the father's example had a greater effect on men than women.

In two other questions, students were asked to rate seven factors as to their positive effect in securing a position in business and as to their positive effect toward upward mobility in business. Both men and women indicated that all of the factors of race, sex, age, non-traditional job role sought, inadequate educational preparation, and family ties or responsibilities were basically neutral factors while the high demand in industry for their skills was indicated as contributory-to-significant. It was observed that women were more likely than men to think their sex would help them secure a position as well as enhance their upward mobility. Women indicated in both instances a rating of only slightly less than contributory while men viewed gender as more of a neutral factor.

On a question designed to detect apprehensions about taking a job typically done by a person of the opposite sex, there was little difference seen in the mean responses of men and women although men indicated slightly greater apprehension than women. In a further probe as to how members of their families or friends would react to their taking a job typically done by a person of the opposite sex, the gap was significantly broader with men indicating dislike by friends and family while women indicated a much more nearly favorable response by both friends and family.

The composite person taking the survey was 21, white, and single with no children. If they had switched from another college into business, they had come from the College of Arts and Sciences. Most indicated they liked their major and felt they would remain in business even if they should switch to another major. The annual parental income was approximately $24,000 with a annual parental contribution towards education about $1,000 while the students' educational contribution was $750. The women's high school grade point average was higher than the men's and has continued higher in college based on indicated cumulative grade point averages. For both men and women, the current cumulative grade point average was lower than their high school grade point average with the gap between the sexes narrowing in college. Of the 429 respondents, 60 percent were men and 40 percent were women, approximately the current enrollment proportions of 63 percent men and 37 percent women for the College of Business Administration.

The maturity of students was indicated by their responses to a question asking what they would do if they won the grand prize in a lottery with an income for life. Both men and women indicated most would continue to work toward their present goal in business while some would shift to another goal but would still remain in the business field.

CONCLUSIONS

The three primary factors influencing increased women's enrollment in the College of Business Administration, University of Arkansas, are their perceptions that

they have more job opportunities, better paying jobs, and a personal aptitude for business. Thus far, the study does not indicate that these reasons significantly differ from the primary factors influencing men's enrollment. Patterns of enrollment in the College of Business Administration, University of Arkansas, appear to be following the national trend with the numerical increase in women's enrollment, Fall 1980 over Fall 1979, exceeding that in men's enrollment.

FOOTNOTES

[1]"Women's Career Interests Shifting; Females Looking to Male-Dominated Fields," *Northwest Arkansas Times,* October 6, 1980:5.

[2]Educational Testing Service, *College-Bound Seniors, 1980,* 1980.

[3]Eugene H. Fox, "Female Enrollment Outpacing Male Enrollment Among Accredited AACSB Members," *American Assembly of Collegiate Schools of Business Bulletin,* Vol. 13, Spring 1977, p. 29.

[4]Office of Institutional Research, University of Arkansas at Fayetteville.

[5]Robert K. Turner, "Enrollment Prospects for Collegiate Schools of Business," *Business Horizons,* Vol. 2, No. 3. October, 1976, pp. 58-59.

[6]Arthur S. Fleming, "Oh, If I Could Only Get A Job," *Good Housekeeping,* 165 (January 1962), p. 22.

[7]Betty Friedan, *The Feminine Mystique,* (New York: W. W. Norton and Company, Inc., 1963) p. 332.

[8]Sheila M. Rothman, *Woman's Proper Place* (New York: Basic Books, Inc., 1978) p. 230.

[9]Jo Freeman, *The Politics of Women's Liberation* (New York: David McKay Company, Inc., 1975) pp. 53-54.

[10]Barbara A. Magill, "Monitoring Trends in the Enrollment of Women in AACSB Schools," *American Assembly of Collegiate Schools of Business Bulletin,* Vol. 13, No. 1. October, 1976, pp. 17-18.

[11]Francesca Cancian and Audri Gordon, "The Effects of the Women's Movement on Increases in Advanced Degrees for Women: A Case Study of A Business School," paper presented at Annual Meeting of the American Sociological Association (New York, August 30-September 3, 1976.)

[12]"Women MBA's, Harvard '73–How They're Doing," *Fortune,* Vol. 98, No. 4, August 28, 1978, p. 50.

[13]Dr. Henry Thibault of the Department of Data Processing and Quantative Analysis in the College of Business at the University of Arkansas was a most valuable asset in determining sampling procedures and assessing survey data.

SOCIAL INDICATORS IN ARKANSAS, 1981: A CAUTIOUS REVERSAL

William R. Darden
R. A. Young, Distinguished Professor
of Business Administration
University of Arkansas, Fayetteville

Donna K. Darden
Assistant Professor of Sociology
University of Arkansas, Fayetteville

E. W. Boatwright
Director, Arkansas Household
Research Panel
University of Arkansas, Fayetteville

"In 1969 . . . a presidential task force was appointed in the United States to develop social indicators to measure the state of citizens' morale, health, and well-being in the same way that the gross national product and the stock market have been used traditionally to measure our economic condition."[1] As yet, these kinds of data are generally gathered on a national basis, using samples of respondents which usually vary from one reporting period to another in the typical cross-sectional research design.

This paper presents a study of social indicators of a somewhat different nature. The data for this study have been gathered quarterly, in the state of Arkansas, for a period of three years, to date, using the Arkansas Household Research Panel (AHRP). Thus, these data are specific to the state of Arkansas, and reflect the changes in opinions and beliefs about their own well-being and that of their state for a relatively constant sample of people, rather than for entirely differing samples taken at different times.

The Arkansas Household Research Panel is composed of approximately 500 households chosen on a stratified systematic random basis so that they are representative of the whole state. The rate of return for mailed questionnaires is consistently quite high—up to 95%—owing to, in part, the nature of panels and to the trading stamps used as incentives for returning completed questionnaires.

This paper reports a series of answers to each of nine questions which have been put to the panel members thirteen times, beginning with June 1978. We believe that, as with other social indicators the replies to these questions give an indication of the way people feel about society and about their lives. Since the time period is a contemporaneous one, there is no need to describe in detail the tenor of the times in which the answers were received.

AHRP SOCIAL INDICATORS

Current Family Financial Status

The first question put to the panel was, "How is your family's financial status compared to a year ago?" Table 1a presents the distribution of replies to this question over the three-year reporting period. The data show a

TABLE 1a

FAMILY FINANCIAL STATUS COMPARED TO A YEAR AGO

Month/Year		Better Off (%)	Same (%)	Worse Off (%)	Don't Know (%)
Jun.	78	39.3	32.9	26.4	1.4
Sep.	78	34.2	34.2	30.1	1.5
Jan.	79	33.7	32.7	32.0	1.6
Mar.	79	25.7	30.9	42.0	1.4
Jun.	79	25.3	31.5	41.9	1.3
Sep.	79	21.1	38.9	37.2	1.5
Jan.	80	22.0	42.2	34.7	1.1
Mar.	80	24.2	36.8	38.5	.5
Jun.	80	19.7	44.5	35.5	.3
Sep.	80	20.6	45.8	33.4	.2
Jan.	81	18.4	40.2	41.1	.3
Mar.	81	21.6	45.0	32.3	1.1
Jun.	81	25.7	45.2	28.3	.8

reversal in what had been a rather consistent tendency for people to report their family finances to be worse through time. Beginning in March 1981, after a low point in January 1981, panel members displayed feelings of improvement in family finances. Although the percentage of people who felt their families to be better off has not returned to the high established in the index period of June 1978, the percentage reporting worse off is the lowest since the initial period. The great increase, of course, is in those people who feel that their finances are unchanged over the year.

It is interesting to compare the data in Table 1a with those in Table 3, which report on the expectations of respondents about their family finances a year in the future. In June 1980, 18.8% expected to be better off by June 1981, and in June 1981, 25.7% actually reported themselves to be better off, so that there was an improvement which surprised 7% of the sample. In June 1980, 23.2% expected to be worse off in a year, whereas 28.3% actually reported themselves as worse off by June 1981. Only about 5% were surprised by being worse off, and perhaps were not too surprised, given the large number of "Don't Know" responses in June 1980. The same pattern holds true for the responses in March 1980 and 1981, where more people in the latter survey felt better than had indicated they expected to in the earlier sample, and the number of worse-offs was about what people had expected.

Business Conditions

Panel members were asked to compare current business conditions with those of a year ago. Table 1b data indicate that many people believe that business conditions are significantly better than they were a year ago. However, rather than indicating a low of improvement, at this point, people seem to sense that businesses are no worse off than they were. The percentage of respondents stating that business conditions are better this year than last increased by close to 100% while still remaining much lower than in June 1978, the index period. The largest amounts of change come in the percentage saying "worse off," which drops from a high of 73.5% in June 1980, to 40.3% in June 1981, and that indicating "Same" which rises to 41.4% after a low of 19.0% in June 1980.

The new tax plan recently passed by Congress had not been enacted at the last reporting, although it was being discussed at the time. People will presumably indicate even more improvement in business conditions in the September 1981 period. Interestingly, compared to the previous year, there were probably more businesses reporting problems (as opposed to the huge profits announced by oil companies, etc.), and more people in Arkansas feeling the effects of business conditions in their personal lives. Interest rates, for example, have continued to rise, affecting many industries and small businesses.

TABLE 1b

BUSINESS CONDITIONS COMPARED TO A YEAR AGO

Month/Year	Better Off (%)	Same (%)	Worse Off (%)	Don't Know (%)
Jun. 78	30.2	47.7	16.4	5.6
Sep. 78	24.6	52.1	17.0	6.3
Jan. 79	22.6	50.5	19.0	7.9
Mar. 79	20.2	49.5	23.3	6.9
Jun. 79	10.1	38.2	45.3	6.4
Sep. 79	6.8	45.8	39.2	7.6
Jan. 80	8.0	43.7	40.2	8.0
Mar. 80	3.9	26.5	67.0	2.6
Jun. 80	4.0	19.0	73.5	3.5
Sep. 80	8.6	29.8	58.4	3.2
Jan. 81	3.4	28.1	65.6	2.9
Mar. 81	9.3	33.5	54.0	3.2
Jun. 81	15.8	41.4	40.3	2.6

Business conditions in Arkansas

Table 2a data reflect replies to a question about business conditions within the state in the next year. Responses show the same cautious expectations reflected in the replies about family conditions. The low point for Arkansas business expectations was reached somewhat earlier (March 1980) and has improved since. The number expecting mixed good and bad times has increased to its highest point, suggesting that most people believe that the conditions in the state are not yet completely normal.

TABLE 2a

BUSINESS CONDITIONS FOR THE NEXT 12 MONTHS IN ARKANSAS

Month/Year	Good Times (%)	Good & Bad Times (%)	Bad Times (%)	Uncertain (%)
Jun. 78	27.0	45.0	7.7	20.3
Sep. 78	24.2	43.3	9.8	22.7
Jan. 79	17.3	50.8	8.8	23.0
Mar. 79	13.1	45.4	20.0	21.6
Jun. 79	5.8	44.8	25.8	23.6
Sep. 79	8.6	47.8	19.4	21.9
Jan. 80	8.5	49.7	18.4	23.4
Mar. 80	1.9	46.6	34.2	17.3
Jun. 80	4.4	50.8	23.2	21.6
Sep. 80	8.6	59.1	15.5	16.8
Jan. 81	4.7	50.9	26.9	17.5
Mar. 81	4.7	60.2	18.2	16.9
Jun. 81	7.8	64.1	64.1	14.2

As politicians and economists realize, personal economic forecasts can have far-reaching consequences, ranging from a self-fulfilling prophecy to spending/saving strategies. The reversal in the pessimistic trend indicates some hope, but the growth in the number expecting mixed times would seem to suggest caution on the part of respondents who are probably somewhat confused over such recent events as the interest problem in the state and the I.R.S. rulings on special savings programs.

The Arkansas Economy

This question is again based on people's predictions and expectations about the future and could be important to the future development of the state. The same pattern is visible in the respondents' expectations for the economy of the state. The low point in their expectations occurred in March 1980, and there has been a slow, steady increase in confidence since the reversal. Again, people are temporizing, as the greatest growth is in the mixed good/bad expectations. (See Table 2b)

Future Family Financial Status

As the differences in replies to questions 1 and 2 demonstrate, personal finances are seen as related to, but not entirely dependent on, business conditions. When people saw business conditions as much worse, their own personal conditions were only relatively worse, or the same. How do they expect their personal finances to be in the near future, since for many of them things did not turn out to be quite so bad as they had expected?

Table 3 shows that this indicator may be the most sensitive one, in that there are fluctuations throughout the three years in which it has been used. The lowest expectations occurred in March 1980, with an upswing through September 1980, another low in January 1981, and a subsequent rise. Whereas for most of the other indicators, the anomalous period had been September 1980 just prior to the election—when cognitive dissonance theory would predict it—the anomaly here, if there is one, occurs in January 1981, coinciding with the inauguration of Mr. Reagan. Again, this may be a form of post-decision dissonance, but it is interesting that the personal expectations of many people *fell* after the election and inauguration rather than rising as their predictions for the economy in general did. Perhaps at this point, many Arkansans began to perceive that Reagan's plans would indeed benefit business but that they would derive little personal benefit from such policies. Looking back at Table 1a shows that January 1981 was also the low point in respondents estimations of their current situations.

Intentions to Purchase

Finally, a series of four questions asked respondents to indicate their intentions to purchase durable goods, life insurance, real estate for investment purposes, and stocks/bonds/mutual funds. People's intentions to purchase often reflect their faith or lack of faith in their worlds—personal and social. This last question is an indirect measure of attitudes about the long-range future, because durable

TABLE 2b

ARKANSAS ECONOMY FOR THE NEXT 5 YEARS

Month/Year		Good Times (%)	Good & Bad Times (%)	Bad Times (%)	Don't Know (%)
Jun.	78	27.3	51.3	4.8	16.6
Sep.	78	24.6	49.1	6.6	19.7
Jan.	79	21.7	52.3	6.9	19.1
Mar.	79	15.2	53.0	10.7	21.1
Jun.	79	10.7	56.3	14.6	18.3
Sep.	79	13.0	60.0	10.0	15.7
Jan.	80	11.4	56.8	10.8	20.9
Mar.	80	4.9	66.7	17.0	11.5
Jun.	80	6.5	69.3	9.2	14.9
Sep.	80	9.9	70.2	6.2	13.7
Jan.	81	7.4	69.9	12.4	10.3
Mar.	81	9.4	69.1	8.9	12.6
Jun.	81	9.9	73.1	7.2	9.8

TABLE 3

FAMILY FINANCIAL STATUS A YEAR FROM NOW

Month/Year		Better Off (%)	Same (%)	Worse Off (%)	Don't Know (%)
Jun.	78	30.1	49.0	13.5	7.4
Sep.	78	27.2	46.4	16.0	10.4
Jan.	79	26.9	41.2	18.1	13.8
Mar.	79	19.5	39.8	26.7	14.0
Jun.	79	16.4	36.5	31.3	15.8
Sep.	79	21.1	42.2	23.0	12.9
Jan.	80	18.6	41.2	24.0	16.1
Mar.	80	14.8	38.7	33.4	13.1
Jun.	80	18.8	45.3	23.2	12.7
Sep.	80	19.4	45.8	19.6	15.2
Jan.	81	17.5	42.0	28.6	11.9
Mar.	81	20.3	45.8	20.8	15.5
Jun.	81	24.0	45.8	17.6	12.6

goods, insurance, and investment purchases are an investment in the future. As the data in the Table 4 series show, September 1980 has been, overall, the low point in purchase intentions. The market for stocks/bonds/mutuals has held relatively firm through the entire three years, suggesting that those people whose finances allow them to make such purchases have never lost either the power or the faith. These intentions actually reached a new high in June 1981, perhaps resulting from the many new offerings made by financial institutions such as banks and savings and loan institutions and also as a result of the proposed new tax plan, and a general increase in confidence. The intention to purchase durables has risen, although given the difficulties of arranging for financing, it is hardly surprising that such intentions have not risen higher. The intention to purchase life insurance, where terms are easier to arrange, has never been very high for AHRP members, but interestingly almost equaled the high established in the index period by January 1981, when personal finance assessments were low.

TABLE 4a

INTENTION TO PURCHASE DURABLE GOODS

Month/Year		Good Time to Buy (%)	Don't Know, Depends (%)	Bad Time to Buy (%)
Jun.	78	40.1	49.2	9.7
Sep.	78	44.3	45.3	10.2
Jan.	79	47.3	41.5	11.2
Mar.	79	14.5	48.3	37.2
Jun.	79	19.7	50.0	30.3
Sep.	79	17.5	44.9	35.9
Jan.	80	17.2	51.2	31.6
Mar.	80	36.6	40.6	22.8
Jun.	80	29.9	46.1	24.0
Sep.	80	21.1	47.9	31.0
Jan.	81	23.8	46.7	29.5
Mar.	81	25.5	51.2	23.3
Jun.	81	28.0	46.1	25.9

TABLE 4b

INTENTION TO PURCHASE LIFE INSURANCE (WITHIN 12 MONTHS)

Month/Year		Plan to Buy (%)	Maybe, Depends (%)	Do Not Plan to Buy (%)
Jun.	78	4.9	8.9	86.2
Sep.	78	6.4	6.7	86.9
Jan.	79	5.7	8.6	85.7
Mar.	79	3.6	6.2	90.2
Jun.	79	4.3	7.8	87.8
Sep.	79	4.2	6.8	88.0
Jan.	80	2.9	8.9	88.6
Mar.	80	2.3	7.1	90.6
Jun.	80	3.2	5.5	91.3
Sep.	80	2.2	7.9	89.9
Jan.	81	4.5	5.3	90.2
Mar.	81	3.9	6.1	90.1
Jun.	81	3.8	6.5	89.7

TABLE 4c

INTENTION TO PURCHASE REAL ESTATE FOR INVESTMENT (WITHIN 12 MONTHS)

Month/Year		Plan to Buy (%)	Maybe, Depends (%)	Do Not Plan to Buy (%)
Jun.	78	10.9	24.6	64.5
Sep.	78	11.1	23.6	65.3
Jan.	79	8.1	24.0	67.9
Mar.	79	8.4	23.4	68.3
Jun.	79	6.5	21.8	71.7
Sep.	79	7.4	20.0	71.4
Jan.	80	6.1	22.6	71.3
Mar.	80	4.2	16.0	79.8
Jun.	80	3.7	17.6	78.7
Sep.	80	2.8	21.2	76.0
Jan.	81	3.9	18.1	78.0
Mar.	81	4.4	21.2	74.4
Jun.	81	4.6	21.6	73.8

TABLE 4d

INTENTION TO PURCHASE STOCKS, BONDS, MUTUAL FUNDS, ETC.
(WITHIN 12 MONTHS)

Month/Year		Plan to Buy (%)	Maybe, Depends (%)	Do Not Plan to Buy (%)
Jun.	78	17.4	20.3	62.3
Sep.	78	20.4	15.5	64.0
Jan.	79	18.3	19.7	62.0
Mar.	79	16.9	18.1	64.9
Jun.	79	15.6	21.6	62.9
Sep.	79	15.0	20.5	63.3
Jan.	80	18.0	19.2	62.9
Mar.	80	15.8	15.3	68.9
Jun.	80	18.0	16.9	65.1
Sep.	80	17.4	21.5	61.1
Jan.	81	15.5	21.1	63.4
Mar.	81	17.2	19.7	63.1
Jun.	81	20.4	22.4	57.2

IMPLICATIONS AND CONCLUSIONS

The overall picture of the well-being of Arkansans to be drawn from these indicators is healthier than that found a year ago. Many people expect the future to be better, and many more do not expect it to be worse. Many have found themselves to be at least in the same condition they had been in a year previously, and some found themselves to be better off. They believe that business conditions have reached the bottom point and that the economy in the state will not worsen.

It is important to note that this is a period of somewhat rising expectations, the implications of which are well known. Leaders in the state would do well to consider the possible consequences of such expectations.

As more and more budgets are cut, more and more people will begin to feel the effects of the policies of those whom they have elected to make things better. If the people who expect things not to get worse are the same people who are adversely affected by budget cuts, there could easily be a period of dissatisfaction ensuing.

It is also important to note, however, that the expectations are only rising relatively; that is, people are not expecting things to get a great deal better but instead just not to get worse. Thus, if handled correctly, this could be a period of stability in the state. It could also be a period of stagnation in the state.

The caution expressed in respondents' predictions would lead us to expect caution in other areas of their lives. We may see postponenments of marriages and of elective health and dental care. Delayed marriages, of course, can be remedied and are perhaps beneficial to society. Delayed medical and dental treatment often cannot be remedied, and the costs can be high.

In summary, this report is somewhat optimistic, although hardly anything to produce joy throughout the state. We can expect people open-mindedly, or even open-armedly, to await developments which they hope will relieve some of the pressures in their lives. If the relief is not forthcoming in the long-run, or if the results include added stress, it is doubtful, in view of the rising expectations, that people will respond resignedly.

FOOTNOTE

[1]Lawrence S. Wrightsman, *Sociology Psychology*, 2nd Brief Ed. (Monterrey: Brooks/Cole, 1977), p. 73.

ARE ARKANSAS CONSUMERS BEING DENIED CREDIT BECAUSE OF THE USURY CEILING?

Joseph W. Wilson
Assistant Professor of Finance
University of Arkansas, Fayetteville

Cameron E. Williams
Instructor of Marketing
University of Arkansas, Fayetteville

In the past, numerous authors have written and published information concerning the usury ceiling that the State of Arkansas has on interest rates. Such authors frequently assert that the state's interest rate ceiling hinders Arkansas consumers in obtaining credit. This claim has gained considerable credibility over the past two years as interest rates at the national level have soared.

The notion that the ceiling on interest rates reduces the availability of credit is derived largely from the theory of credit rationing, developed principally by Juster and Shay. These authors place consumers into two categories with regard to credit: rationed and nonrationed. They define rationed consumers "as those who, given the finance rate, desire more credit than the primary or majority of credit sources (banks and sales finance companies) are willing to grant" and nonrationed consumers "as those whose demand for credit is satisfied by their actual borrowing from primary credit sources."[1] The definition of consumer credit has been broadened to apply to consumer credit from any source, including retail stores.[2] Upon expanding the concept, we find that consumers who are rationed are expected to be insensitive to interest rates because additional credit is more important to them than the rate of interest. In other words, rationed consumers are not sensitive to the cost of credit because they are never allowed to satisfy all of their borrowing needs at the given rates.[3] Given this circumstance, rationed consumers, especially in states that have interest rate ceilings, may be expected to seek out illegal lenders to satisfy their credit needs or to buy consumer goods from sellers of low quality goods who extend "easy credit" and charge high prices.[4]

From past research findings, two things are suggested regarding rationed consumers in a state like Arkansas which has an interest rate ceiling: (1) Arkansas consumers are being denied credit because national interest rates are much higher than the 10 percent limit allowed by the state, and (2) rationed consumers in Arkansas should be willing to pay a higher interest rate than 10 percent to obtain more credit.

The purpose of this study is two-fold–first, to determine to what extent Arkansas consumers feel they are being denied credit because of the 10 percent usury

ceiling, and second, to determine if rationed consumers in Arkansas are willing to pay a higher interest rate than 10 percent in order to obtain more credit.

LIMITATIONS OF THE STUDY

Before presentation of the findings of this study a brief explanation of the consumer credit market is in order.

First, no attempt was made to analyze information concerning mortgage loans, for this type of credit is unique and is not generally classed as consumer credit. Second, no attempt was made to determine the policies of state lenders toward consumer credit. The study dealt only with how the Arkansas consumer perceived his ability to obtain credit and from what sources he obtained it.

The principal areas of consumer credit dealt with in the study were: (1) auto loans, (2) small consumer loans of less than $500, and (3) retail credit limits.

METHODOLOGY

Rationed and nonrationed categories of consumers were established based upon the results of cluster and discriminant analysis using five variables: income, demand for consumer durables, liquidity, attitude towards indebtedness, and degree of risk. The final discriminant function included all mentioned variables except demand for consumer durables.

The model stipulated that a rationed consumer was one who had a total family income of less than $23,500, less than $5,000 of liquid assets, a positive attitude towards indebtedness, and a relatively good credit rating based upon a credit scoring model. The source of information for the study was a mail survey to a stratified sample of three hundred consumers in five Arkansas cities: Little Rock, North Little Rock, Fort Smith, Pine Bluff, and Fayetteville. Those urban areas were chosen due to the similarity of income levels across all groups surveyed.

FINDINGS

A major objective was to obtain the proper division in the sample between rationed and nonrationed consumers. Approximately 44 percent of the respondents were in the traditionally defined rationed category. The overall response rate to the questionnaire was 42 percent.

The findings of the study did not coincide with the conclusions of other researchers on rationed consumers. Eighty percent of the rationed consumer respondents felt that they were not having a difficult time in obtaining credit and that they had not had to delay a purchase of needed household goods because they could not obtain the necessary credit. That attitude can best be explained by the replies the respondents gave with respect to where they obtained credit. Sixty-five percent of the rationed consumers stated they obtained credit from the use of gasoline credit cards, national retail store credit cards, and bank credit cards. The approximate number of credit cards in each family averaged three and the average credit limit on each card was in excess of $600.

A majority (51 percent) of the rationed consumer respondents expressed the opinion that the Arkansas Constitution should not be amended to provide for a higher ceiling on interest rates for loans. They also expressed the belief that the rate of interest charged is more important than the amount of credit issued.

The findings also revealed that 85 percent of the rationed consumers who participated in this survey were between the ages of 35 and 55. This may have biased the results of the study somewhat because the sample was selected from the 1970 census block data. The use of that census for choosing the sample may have contributed to the upper age brackets.

DISCUSSION

A significant conclusion to be drawn from the findings concerns the obtainment, by participants in this survey, of consumer credit from national sources–primarily, credit cards from petroleum companies and national retail stores. Since consumers have been able to obtain such lines of credit, many do not have to depend upon local merchants who may be unwilling to extend consumer credit at a rate of 10 percent. As for bank cards, with the advent of the "Omnibus Banking Bill," federally insured banks can charge rates higher than the state's 10 percent ceiling. With the power to charge the consumer interest rates of one percent above the discount rate, i.e. the rate that the Federal Reserve charges on loans to member banks, banks can obtain interest rates closer to the national average; and, thereby, bank credit cards become a realistic means to extend small, even continuous, loans to consumers. For example, many banks allow cash loans of up to $300 on their cards. At the time of this study, automobile sales were at a low ebb and many national sales finance companies–GMAC, Ford Credit, Chrysler Credit–were encouraging consumers to buy automobiles at the 10 percent rate.

SUMMARY

In summary, it must be stated that local merchants in Arkansas have greatly curtailed credit to both rationed and nonrationed consumers;[5] however, consumers in Arkansas, in recent years, have obtained credit from national rather than local sources, which allows the perception that they are not being denied credit. That perception that the consumer is not being denied credit in many instances becomes reality since a consumer is able to purchase on credit an automobile, gasoline, and as many durable goods as he/she can comfortably pay for.

FOOTNOTES

[1]Juster, F. and Shay, T., "Consumer Sensitivity to Finance Rates", (National Bureau of Economic Research, Occasional Paper No. 88), Harvard University (1964).

[2]Sauter, R., and O. Walker, "Retailers Reactions to Interest Limitation Laws–Additional Evidence", *Journal of Marketing,* Volume 36 (April, 1972).

[3]Juster & Shay.

[4]Shay, T., "The Impact of State Legal Rate Ceilings Upon the Availability and Price of Credit", An Economic Analysis of Consumer Credit, (Washington, D.C.: USGPO 1972).

[5]Peterson, R.L. and Falls, G.A., "Impact of a Ten Percent Usury Ceiling: Empirical Evidence" (Krannert Graduate School Management Working Paper No. 40) Purdue University (1981).

EXPECTATIONS: A TROUBLESOME DIMENSION OF POLICYMAKING

Thomas R. McKinnon
Director, Bessie B. Moore Center
for Economic Education
University of Arkansas, Fayetteville

Back in 1973 as Americans experienced not only the oil embargo but also the shortfalls of a number of other goods, Johnny Carson in his nightly monologue noted the situation and speculated that "the next thing we know there will be a shortage of toilet paper." Many viewers across the country took him seriously, rushed out to stock up, and by the following afternoon, grocery store shelves were empty of this most vital product. Even though there was no real problem with the production and distribution of toilet paper, consumer expectations had created a problem. Expectations had been self-fulfilling. In recent years expectations, not only of consumers but of all segments of the economy, have played havoc with economic policy.

Economists have been a little hesitant to deal with expectations because of involvement in the realm of psychology; yet, while economists are a bit uneasy there, they have a growing recognition of the importance of expectations. One economist recently called for a reconstruction of the entire field of macroeconomics in order to account for this aspect of human behavior.

Expectations may very well be the primary culprit in the recent failures of fiscal and monetary policies. Indeed expectation of policy implementation can destablize. A good example is the investment tax credit. The investment tax credit has been an important tool to combat recession. As the economy enters the contractionary phase of the business cycle, Congress has repeatedly enacted a tax credit to encourage business investment. According to the rationale, the resulting investment stimulates a spiral of increased spending which brings about recovery. However, when business firms expect a recession to occur and expect the government to enact an investment tax credit, they postpone investment to take advantage of the anticipated tax break. Such delay may in fact, cause a recession; thus expectations will have become self-fulfilling and the policy, counter-productive.

Consumer expectations may blunt the impact of tax changes for stabilization purposes. Consumers have come to expect tax cuts to offset recession and tax increases to combat inflation, but the experience of the last twenty years has shown that such policy changes are temporary. Since durable goods cannot be financed on temporary income, consumers ignore the temporary income and make decisions based on permanent or expected income over time.

Even the announcement of a policy before it takes effect can be destabilizing. If the actual policy differs from the expected policy, the outcome may be the opposite of what was intended. For example, if an announced 20% tax cut comes down as only a 10% cut, there is a 10% expectation shortfall, and consumption may actually decline rather than increase.

The crucial factor in determining the effect of a policy change is not the action taken in isolation, but

public perception of the underlying strategy over time. The response of oil companies, for example, to a tax increase depends on their expectations about the longer term policy. If the tax increase is viewed as temporary, companies may hold down current production to increase it later after the tax has expired. However, if companies believe that the tax increase is permanent and will be followed by further increases, they may expand current production.

Expectations about the political philosophy of a particular administration are important in determining public response to policy actions.

Recognition of the problem does not mean that we should despair of using fiscal and monetary policy to combat instability but that we must incorporate expectations into our models. The task may not be easy but the return will be great.

SELECTED ARKANSAS AND U.S. ECONOMIC INDICATORS

Arkansas Economy: Q-II, 1981 24

Index of Total Employment, Arkansas and United States 25

Index of Personal Income, Arkansas and United States 26

Index of Value Added by Manufacture, Arkansas, and Index of Manufacturing Production, United States 27

Index of Cash Receipts from Farm Marketing, Arkansas and United States 28

Indexes of Activity of Arkansas Savings and Loan Associations 29

Index of Residential Construction Contracts, Arkansas and United States 30

Index of Nonresidential Construction Contracts, Arkansas and United States 31

Waterborne Commerce McClellan-Kerr Arkansas Navigation System 32

Consumer Prices 33

Labor Force Estimates–August 1981 34

ARKANSAS ECONOMY: Q-II, 1981

Phillip H. Taylor
Director, Bureau of Business
and Economic Research
University of Arkansas, Fayetteville

Arkansans' total personal income advanced again in the second quarter to an annualized rate very near $18 billion. While most of the indicators registered improvement when compared to the initial quarter of the year, there were few bright spots in the state's economy.

Seasonally adjusted total employment remained below the levels of both 1979 and 1980. At the same time, the index of value added by manufacture, while above the 1980 level, showed virtually no increase between the first and second quarters.

Residential construction, seasonally adjusted, declined for the second quarter in a row. Through the second quarter, residential construction was moving at an annual pace that projects to be the lowest total since 1976. Nonresidential construction is not seasonally adjusted but it dropped, on a quarter-to-quarter basis, for the second consecutive period. Moreover, comparing identical periods in other years, it was the lowest Quarter II since 1978.

The trend in savings and loan activity continued downward sharply. Net new savings were negative during the second quarter and total new loans grew at an annualized pace that projects to be the lowest yearly total since 1974.

Through the first half of the year the only really bright spot in the Arkansas economy was the agricultural sector. Cash receipts from farm marketings were at their highest second quarter level in history. At this point it appears that the total for the year may well set a record high.

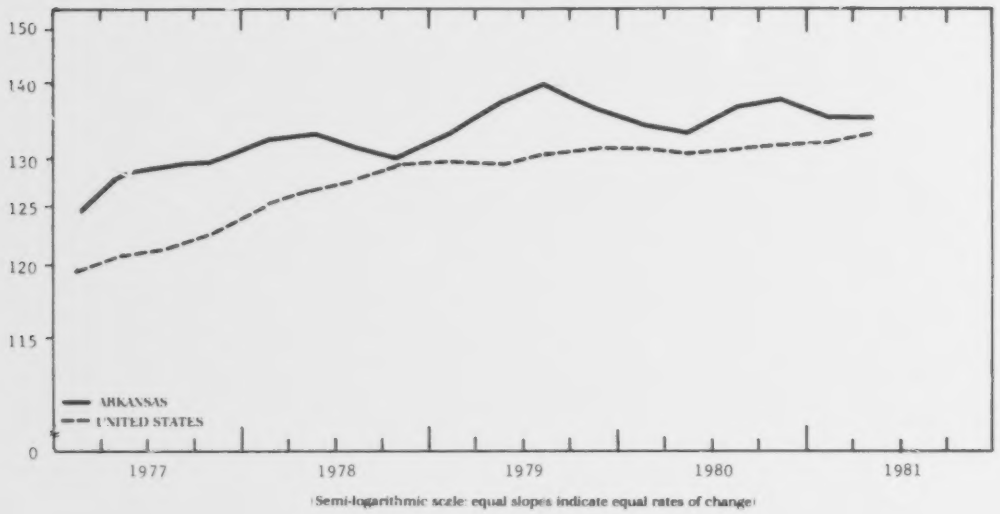
With the national economy officially moving into a recession in the third quarter and forecast to remain in one through the initial quarter of 1982, the prospect for the Arkansas economy is also downward. Unemployment in the state has been moving upward in recent months and may well approach nine percent or more as the recession worsens. Agriculture, though, will continue to add strength in the regions of the state where it is a major sector of the economy and, at the same time, inflation will push personal income upward.

Interest rates were declining in early November and should continue downward as the economy slows. However, rates should remain well above ten percent. Thus, it may be several months before a recovery is witnessed by the construction industry.

At this point, most economists are forecasting only a mild recession of moderate length. Should this be the case, Arkansas' economic outlook should begin to improve around mid 1982 and continue upward for the remainder of the year.

INDEX OF TOTAL EMPLOYMENT, ARKANSAS AND UNITED STATES

Quarterly data, seasonally adjusted, 1967= 100



(Semi-logarithmic scale: equal slopes indicate equal rates of change)

Base Year to Date and Quarterly Changes in Total Employment

Seasonally adjusted, percent

	1967 to 1981 Q-II	1980 Q-II to 1980 Q-III	1980 Q-III to 1980 Q-IV	1980 Q-IV to 1981 Q-I	1981 Q-I to 1981 Q-II
Arkansas	+ 35.8	+ 2.2	+ 0.8	- 2.0	+ 0.3
United States	+ 32.9	+ 0.2	+ 0.2	+ 0.8	+ 0.9

EMPLOYMENT BY MAJOR INDUSTRY GROUP IN ARKANSAS, AND UNEMPLOYMENT RATE , ARKANSAS AND UNITED STATES

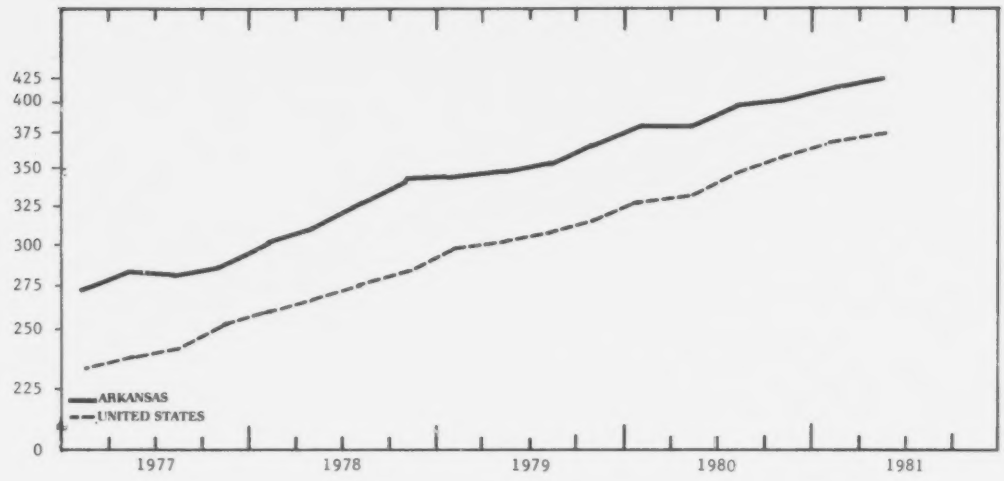
Seasonally adjusted

TIME PERIOD	EMPLOYMENT				UNEMPLOYMENT RATE	
	Wage and Salary		Agricultural	Total	Arkansas	United States
	Manufacturing	Nonmanufacturing				
1974	201,300	432,200	56,700	786,800	5.0	5.6
1975	175,500	444,500	61,000	776,700	8.9	8.5
1976	187,300	445,100	65,600	794,000	6.2	7.7
1977	208,900	483,400	62,800	837,700	6.0	7.0
1978	216,500	507,350	61,250	868,400	6.4	6.0
1979	217,750	526,700	65,800	904,000	6.3	5.8
1980	210,050	540,400	65,100	896,200	7.4*	7.2
1981						
Q-I	210,100	537,250	63,300	892,420	9.1*	7.3
Q-II	212,950	537,050	64,350	894,840	7.9*	7.4

*Actual Rate. Effective January 1977 the Arkansas Employment Security Division revised its adjustments to employment data based on methods developed by the U.S. Bureau of Labor Statistics. As a result, the Arkansas unemployment rate cannot be seasonally adjusted at this time.

INDEX OF PERSONAL INCOME,
ARKANSAS AND UNITED STATES

Quarterly data, seasonally adjusted, 1967= 100



(Semi-logarithmic scale: equal slopes indicate equal rates of change)

Base Year to Date and Quarterly Changes in Personal Income

Seasonally adjusted, percent

	1967 to 1981 Q-II	1980 Q-II to 1980 Q-III	1980 Q-III to 1980 Q-IV	1980 Q-IV to 1981 Q-I	1981 Q-I to 1981 Q-II
Arkansas	+ 324.5	+ 4.7	+ 2.5	+ 3.0	+ 2.3
United States	+ 271.9	+ 3.2	+ 3.4	+ 2.9	+ 2.1

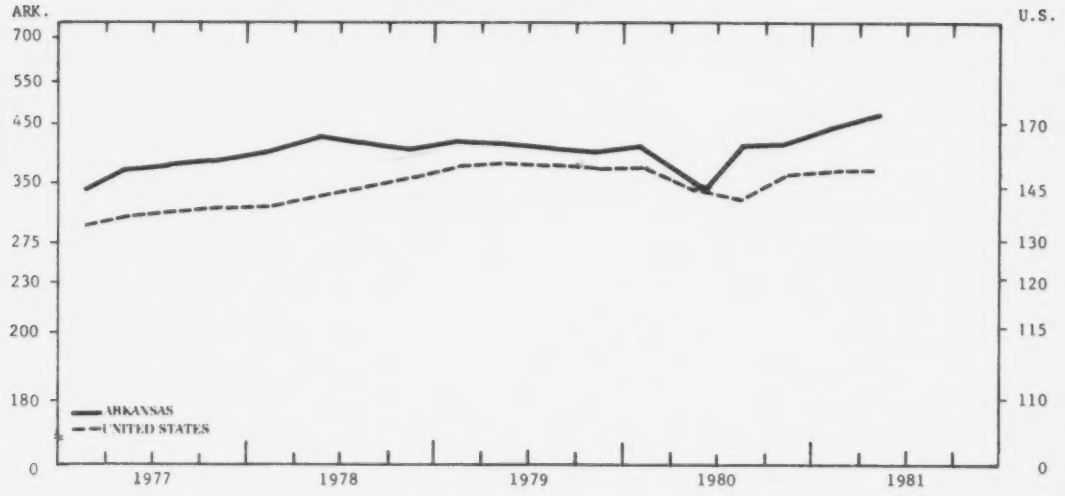
PERSONAL INCOME
IN ARKANSAS

Millions of dollars, seasonally adjusted

Quarter	1974	1975	1976	1977	1978	1979	1980	1981
Jan-Mar	2,142	2,070	2,508	2,837	3,118	3,698	4,002	4,394
Apr-Jun	2,242	2,373	2,667	2,948	3,208	3,681	3,975	4,495
Jul-Sep	2,213	2,391	2,626	2,984	3,315	3,805	4,160	
Oct-Dec	2,234	2,368	2,676	3,070	3,406	3,929	4,265	
Annual	8,831	9,202	10,477	11,839	13,047	15,113	16,402	

INDEX OF VALUE ADDED BY MANUFACTURE, ARKANSAS, AND INDEX OF MANUFACTURING PRODUCTION, UNITED STATES

(Quarterly data, seasonally adjusted, 1967= 100)



(Semi-logarithmic scale: equal slopes indicate equal rates of change)

Base Year to Date and Quarterly Changes in Manufacturing

Seasonally adjusted, percent

	1967 to 1981 Q-II	1980 Q-II to 1980 Q-III	1980 Q-III to 1980 Q-IV	1980 Q-IV to 1981 Q-I	1981 Q-I to 1981 Q-II
Arkansas	+ 347.2	+ 2.6	+ 4.3	+ 6.2	+ 0.1
United States	+ 52.7	- 2.3	+ 5.3	+ 2.1	+ 0.6

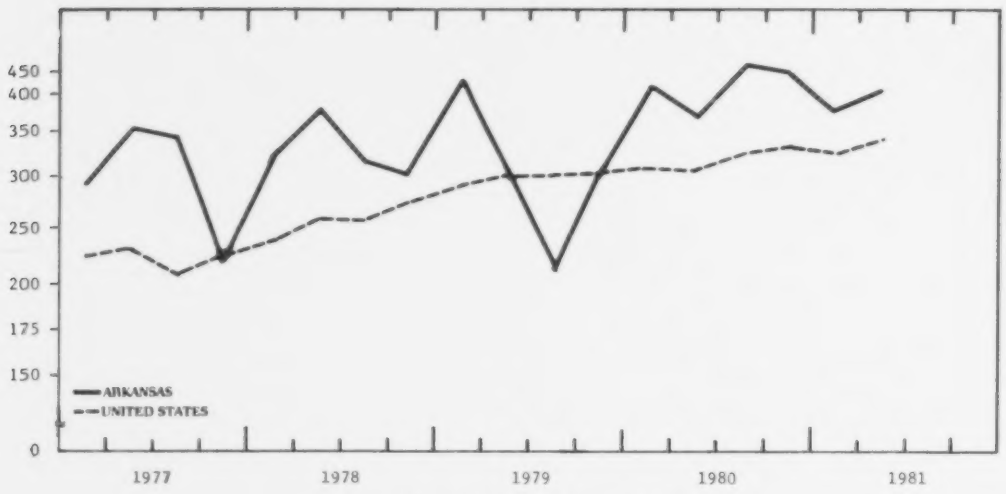
VALUE ADDED BY MANUFACTURE IN ARKANSAS

Millions of dollars

	Seasonally adjusted								Not seasonally adjusted
Quarter	1974	1975	1976	1977	1978	1979	1980	1981	1981
Jan-Mar	959.6	899.5	1,158.2	1,362.9	1,598.4	1,666.0	1,655.1	1,750.4	1,642.3
Apr-Jun	975.8	895.1	1,161.4	1,443.1	1,659.2	1,656.2	1,540.2	1,753.1	1,737.1
Jul-Sep	963.0	925.7	1,194.4	1,451.8	1,619.3	1,611.1	1,579.5		
Oct-Dec	924.0	985.2	1,160.8	1,468.6	1,597.3	1,602.4	1,647.7		
Annual	3,822.4	3,705.5	4,674.8	5,726.4	6,474.2	6,535.7	6,422.5		

INDEX OF CASH RECEIPTS FROM FARM MARKETINGS
ARKANSAS AND UNITED STATES

Quarterly data, seasonally adjusted 1967 = 100



(Semi-logarithmic scale: equal slopes indicate equal rates of change)

Base Year to Date and Quarterly Changes in Cash Receipts

Seasonally adjusted, percent

	1967 to 1981 Q-II	1980 Q-II to 1980 Q-III	1980 Q-III to 1980 Q-IV	1980 Q-IV to 1981 Q-I	1981 Q-I to 1981 Q-II
Arkansas	+ 303.8	+ 22.5	- 0.9	- 13.9	+ 3.9
United State	+ 241.4	+ 6.1	+ 2.1	- 2.7	+ 2.2

CASH RECEIPTS FROM FARM MARKETINGS
IN ARKANSAS

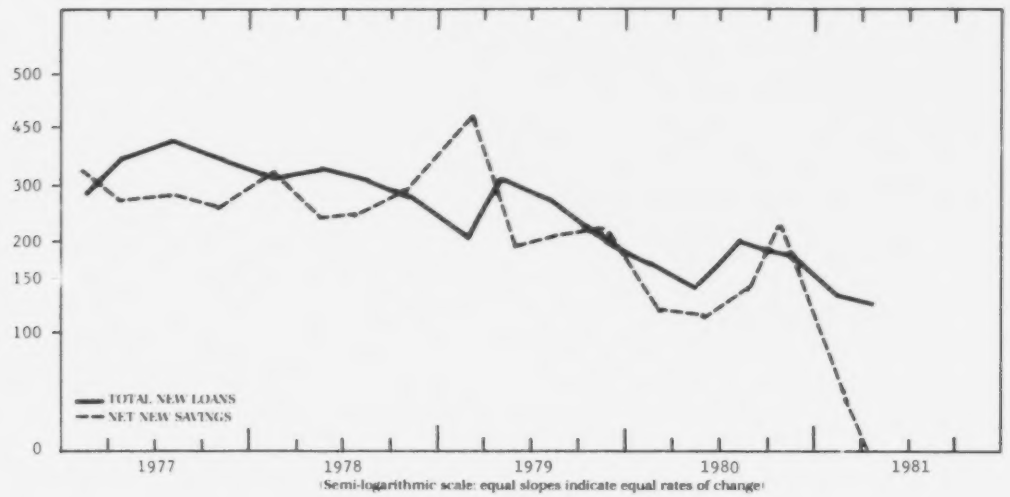
Thousands of dollars

	Seasonally adjusted								Not seasonally adjusted
Quarter	1974	1975	1976	1977	1978	1979	1980	1981	1981
Jan-Mar	718,418	529,492	565,575	686,105	790,387	1,038,085	989,950	900,077	662,150
Apr-Jun	705,678	584,346	740,954	703,457	899,118	532,344	861,500	935,550	674,950
Jul-Sep	568,678	609,324	621,624	578,357	721,275	835,030	1,054,950		
Oct-Dec	618,796	508,651	497,214	500,169	601,443	704,385	1,044,850		
Annual	2,611,570	2,231,813	2,425,367	2,468,088	3,012,223	3,231,844	3,951,250		

INDEXES OF ACTIVITY OF ARKANSAS SAVINGS AND LOAN ASSOCIATIONS

TOTAL NEW LOANS AND NET NEW SAVINGS

Quarterly data, not seasonally adjusted 1967 = 100



(Semi-logarithmic scale: equal slopes indicate equal rates of change)

Base Year to Date and Quarterly Changes in Activity of Arkansas S & L Associations

Not seasonally adjusted, percent

	1967 to 1981 Q-II	1980 Q-II to 1980 Q-III	1980 Q-III to 1980 Q-IV	1980 Q-IV to 1981 Q-I	1981 Q-I to 1981 Q-II
Total New Loans	+ 25.1	+ 39.0	- 12.9	- 24.2	- 5.6
Net New Savings	- 140.5	+ 27.1	+ 68.0	- 81.3	- 191.6

ECONOMIC ACTIVITY OF

ARKANSAS SAVINGS AND LOAN ASSOCIATIONS

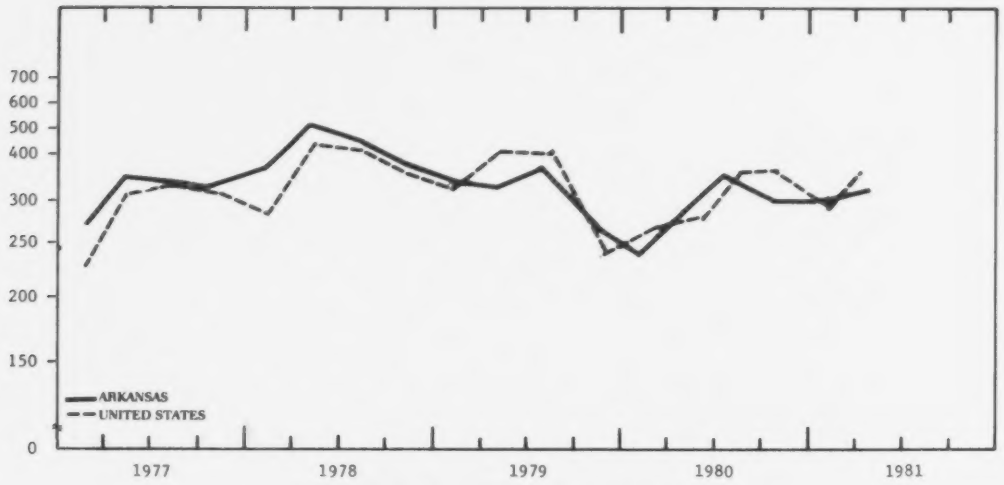
Thousands of dollars

TIME PERIOD	TOTAL NEW LOANS		NET NEW SAVINGS	
	Current $	1967 $	Current $	1967 $
1974	300,152	203,915	188,400	123,872
1975	413,366	255,678	309,304	192,119
1976	606,400	355,280	393,300	231,050
1977	815,800	448,590	405,000	223,492
1978	729,300	373,700	416,900	213,610
1979	625,900	290,560	436,830	204,525
1980	504,700	204,275	287,600	115,580
1981				
Q-I	103,100	39,220	22,300	8,480
Q-II	99,600	37,030	- 20,900	- 7,770

INDEX OF RESIDENTIAL CONSTRUCTION CONTRACTS

ARKANSAS AND UNITED STATES

Quarterly data, not seasonally adjusted 1967= 100



(Semi-logarithmic scale: equal slopes indicate equal rates of change)

Base Year to Date and Quarterly Changes in Residential Construction

Not seasonally adjusted, percent

	1967 to 1981 Q-II	1980 Q-II to 1980 Q-III	1980 Q-III to 1980 Q-IV	1980 Q-IV to 1981 Q-I	1981 Q-I to 1981 Q-II
Arkansas	+ 229.6	+ 22.2	- 13.3	- 1.5	+ 9.7
United States	+ 272.9	+ 29.4	+ 0.7	- 21.2	+ 28.0

RESIDENTIAL CONSTRUCTION CONTRACTS

IN ARKANSAS

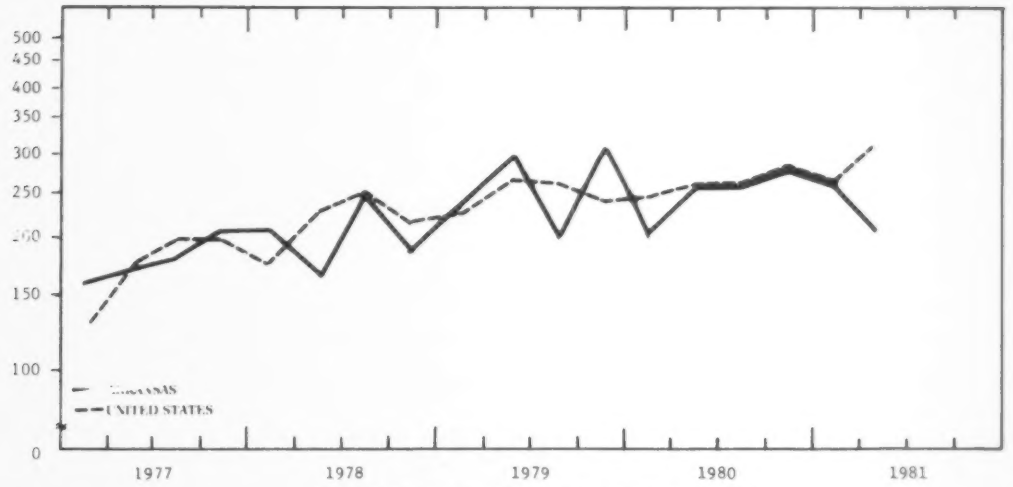
Thousands of dollars

	Seasonally adjusted								Not seasonally adjusted
Quarter	1974	1975	1976	1977	1978	1979	1980	1981	1981
Jan-Mar	93,249	84,488	116,379	160,861	220,739	205,119	144,050	176,180	161,900
Apr-Jun	94,963	85,740	117,164	173,558	236,915	153,917	137,600	159,750	177,600
Jul-Sep	84,214	98,557	122,732	182,210	227,633	193,364	177,450		
Oct-Dec	82,505	104,656	134,927	217,222	236,718	154,130	185,450		
Annual	354,931	373,441	491,202	733,851	922,005	706,530	664,550		

INDEX OF NONRESIDENTIAL CONSTRUCTION CONTRACTS

ARKANSAS AND UNITED STATES

Quarterly data, not seasonally adjusted 1967 = 100



(Semi-logarithmic scale: equal slopes indicate equal rates of change)

Base Year to Date and Quarterly Changes in Nonresidential Construction Contracts

Not seasonally adjusted, percent

	1967 to 1981 Q-II	1980 Q-II to 1980 Q-III	1980 Q-III to 1980 Q-IV	1980 Q-IV to 1981 Q-I	1981 Q-I to 1981 Q-II
Arkansas	+ 101.9	+ 0.8	+ 8.5	- 9.2	- 19.7
United States	+ 211.2	+ 3.8	+ 8.8	- 8.1	+ 17.2

NONRESIDENTAL CONSTRUCTION CONTRACTS

IN ARKANSAS

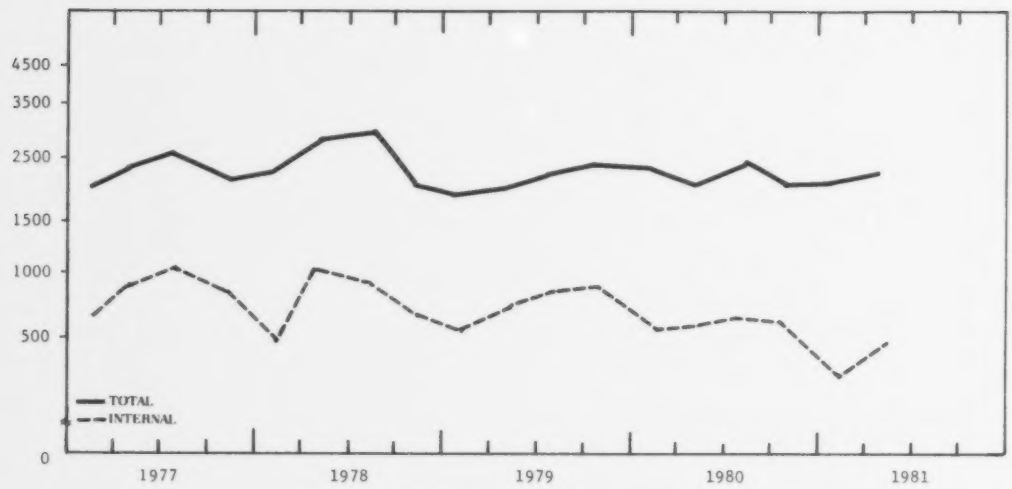
Thousands of dollars, not seasonally adjusted

Quarter	1974	1975	1976	1977	1978	1979	1980	1981
Jan-Mar	56,094	79,225	43,591	57,486	72,851	88,988	72,300	90,500
Apr-Jun	63,607	67,424	93,906	63,726	60,479	109,976	91,200	72,700
Jul-Sep	106,530	45,566	67,913	67,632	90,471	70,296	91,900	
Oct-Dec	56,247	89,446	79,004	76,866	69,041	112,549	99,700	
Annual	272,478	281,661	284,414	265,710	292,842	381,809	355,100	

WATERBORNE COMMERCE

McCLELLAN-KERR ARKANSAS RIVER NAVIGATION SYSTEM

Quarterly data in thousands of short tons, not seasonally adjusted



(Semi-logarithmic scale: equal slopes indicate equal rates of change)

Base Year to Date and Quarterly Changes in Total and Internal Tonnages

Not seasonally adjusted, percent.
Base = Ave. Qtr. 1971

	1971 to 1981 Q-II	1980 Q-II to 1980 Q-III	1980 Q-III to 1980 Q-IV	1980 Q-IV to 1981 Q-I	1981 Q-I to 1981 Q-II
Total	+ 158.6	+ 9.2	- 11.9	+ 1.1	+ 10.6
Internal	24.1	+ 17.5	- 7.6	- 36.6	+ 16.9

FREIGHT TRAFFIC

ARKANSAS RIVER COMMERCE

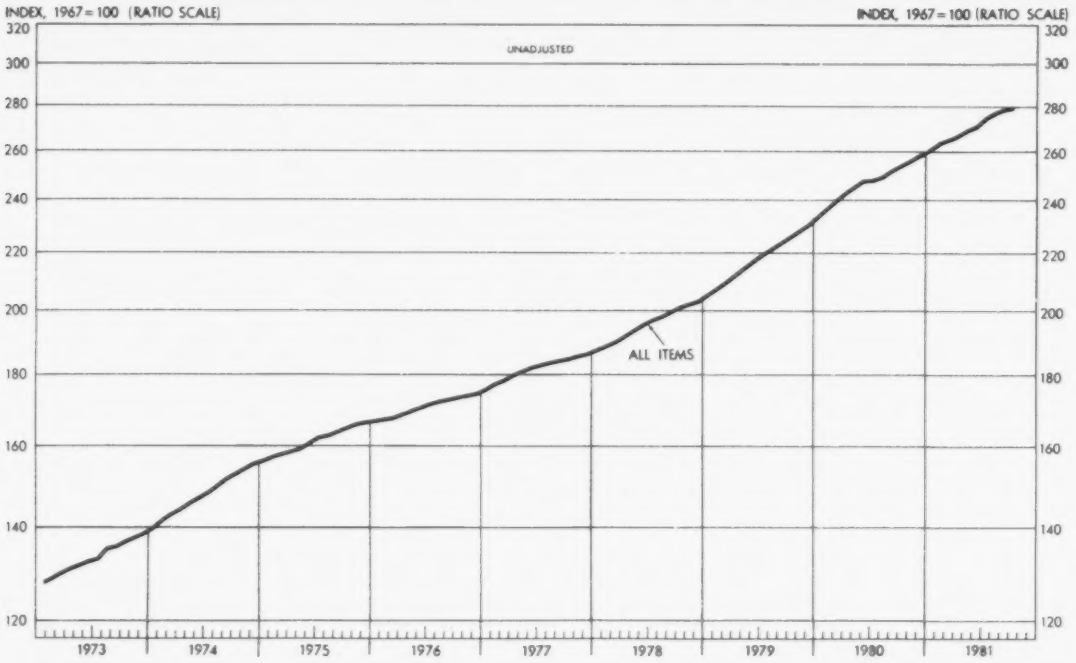
Thousands of short tons, not seasonally adjusted.

TIME PERIOD	TRAFFIC TONNAGES*			
	INBOUND	OUTBOUND	INTERNAL	TOTAL
1974	1,950	775	2,959	6,060
1975	1,440	870	2,465	5,204
1976	1,988	1,663	3,033	7,078
1977	2,841	2,339	3,463	9,138
1978	2,595	3,899	3,170	10,216
1979	2,026	3,456	2,932	8,926
1980	1,611	4,643	2,408	9,133
1981				
Q-I	343	1,220	394	2,131
Q-II	372	1,399	461	2,357

*Total tonnage includes "through traffic"--shipments which originate and terminate outside the Arkansas River Commerce Area.

CONSUMER PRICES

In October, the consumer price index for all urban consumers rose 0.4 percent, seasonally adjusted (0.2 percent unadjusted). Food and beverage prices were up 0.2 percent, seasonally adjusted, and energy prices were down 0.5 percent, not seasonally adjusted.



SEE NOTE ON TABLE BELOW
SOURCE: DEPARTMENT OF LABOR

[1967=100; monthly data seasonally adjusted, except as noted]

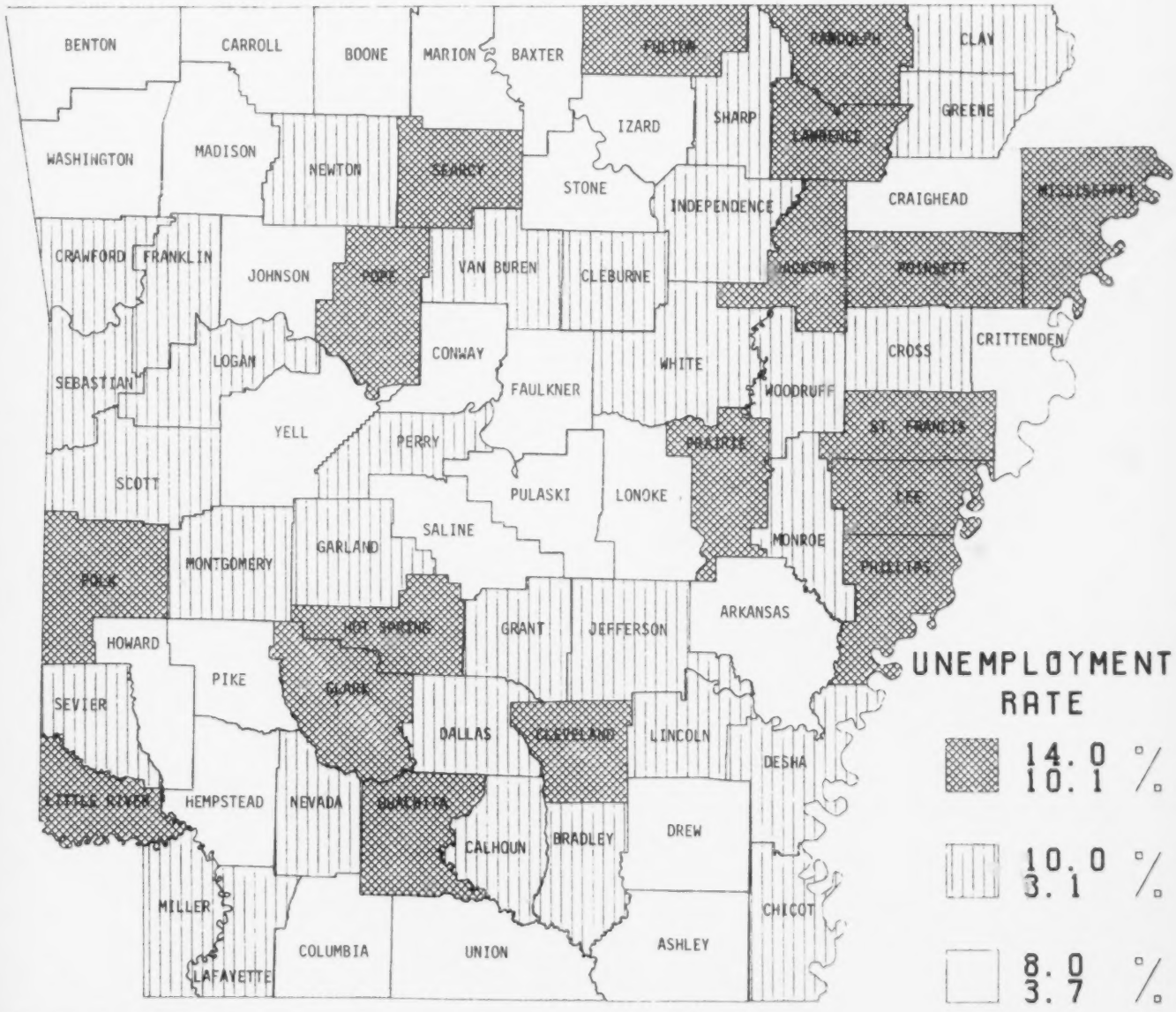
Period	All items [1] NSA	Food and beverages	Housing: Total [1]	Housing: Home purchase NSA	Housing: Financing, taxes, and insurance NSA	Apparel and upkeep	Transportation: Total [1]	Transportation: New cars	Transportation: Motor fuel [2]	Medical care	Energy [3] NSA	Services	All items less food, energy, and home purchase and finance [4]
Rel. imp. [5]	*100.0*	*18.3*	*45.5*	*10.3*	*12.0*	*4.9*	*19.0*	*3.6*	*5.9*	*4.7*	*10.8*	*41.6*	*49.6*
1973	133.1	139.5	133.7	132.7	160.6	126.8	123.8	111.1	118.1	137.7	123.5	139.1	128.5
1974	147.7	158.7	148.8	142.7	181.1	136.2	137.7	117.5	159.9	150.5	159.7	152.1	138.5
1975	161.2	172.1	164.5	160.3	201.9	142.3	150.6	127.6	170.8	168.6	176.6	166.6	150.5
1976	170.5	177.4	174.6	168.4	212.8	147.6	165.5	135.7	177.9	184.7	189.3	180.4	160.8
1977	181.5	188.0	186.5	179.5	227.2	154.2	177.2	142.9	188.2	202.4	207.3	194.3	170.6
1978	195.4	206.3	202.8	196.7	257.8	159.6	185.5	153.8	196.3	219.4	220.4	210.9	180.9
1979	217.4	228.5	227.6	223.1	308.9	166.6	212.0	166.0	265.6	239.7	275.9	234.2	194.1
1980	246.8	248.0	263.3	254.3	396.0	178.4	249.7	179.3	369.1	265.9	361.1	270.3	211.6
1980: Oct.	253.9	257.2	270.8	265.5	404.7	182.1	256.6	183.3	371.3	272.9	368.0	277.9	217.4
Nov.	256.2	260.2	274.1	267.3	416.9	182.8	259.9	183.5	373.6	274.6	366.1	281.5	219.1
Dec.	258.4	262.6	277.4	267.2	429.4	182.8	262.4	183.3	377.3	276.2	370.4	285.5	220.8
1981: Jan.	260.5	262.6	279.5	266.2	435.2	182.5	267.0	183.5	391.5	279.2	381.7	288.0	221.9
Feb.	263.2	263.4	281.3	263.0	437.1	184.0	273.4	183.3	417.5	281.7	401.1	290.3	223.7
Mar.	265.1	264.5	282.8	261.1	441.1	185.8	275.9	182.5	427.1	284.1	409.3	292.6	225.1
Apr.	266.8	264.5	284.8	260.7	447.1	186.1	275.7	185.7	421.0	286.6	409.8	295.4	226.9
May	269.0	263.9	288.4	263.0	458.3	185.7	276.5	190.1	414.8	289.1	411.3	299.6	228.3
June	271.3	264.5	291.7	266.6	467.2	185.8	277.2	192.2	408.7	292.1	414.0	303.1	229.9
July	274.4	266.7	296.5	271.4	480.0	186.8	279.4	193.3	404.8	295.9	415.7	308.5	232.6
Aug.	276.5	268.7	299.4	272.6	488.3	188.3	281.1	193.4	403.6	299.6	416.1	312.1	234.3
Sept.	279.3	271.3	303.3	274.5	501.8	189.4	284.4	194.6	[2] 405.8	302.2	417.1	316.9	236.7
Oct.	279.9	271.9	303.3	272.5	501.8	189.7	287.8	194.1	410.7	305.1	414.9	318.3	238.4

[1] Includes items not shown separately.
[2] Includes direct pricing of diesel and gasohol beginning September 1981.
[3] Fuel oil, coal, and bottled gas; gas (piped) and electricity; and motor fuel, motor oil, coolant, etc.
[4] Estimated series. Finance includes financing, taxes, and insurance.
[5] Relative importance, December 1980.

NOTE.—NSA indicates data are not seasonally adjusted.
Data beginning 1978 are for all urban consumers; earlier data are for urban wage earners and clerical workers.
Source: Department of Labor, Bureau of Labor Statistics.

LABOR FORCE ESTIMATES
AUGUST 1981

IN AUGUST, THE ARKANSAS CIVILIAN LABOR FORCE ROSE 7,100 TO A TOTAL OF 1,024,700. TOTAL EMPLOYMENT INCREASED 6,500 TO A TOTAL OF 939,000 WITH UNEMPLOYMENT RISING 600 TO A TOTAL OF 85,400. AMONG THE 75 COUNTIES, MARION HAD THE LOWEST UNEMPLOYMENT RATE AT 3.7 PERCENT AND POINSETT HAD THE HIGHEST AT 13.5 PERCENT. MOREOVER, THE UNEMPLOYMENT RATE IN 44 COUNTIES EQUALLED OR EXCEEDED THE STATE RATE. IN THE FOUR SMSAs, THE UNEMPLOYMENT RATE WAS LOWEST AT 5.4 PERCENT IN THE FAYETTEVILLE-SPRINGDALE SMSA AND HIGHEST AT 9.9 PERCENT IN THE PINE BLUFF SMSA. THE RATES FOR THE LITTLE ROCK-NORTH LITTLE ROCK AND FORT SMITH SMSAs WERE 7.5 AND 8.1 PERCENT, RESPECTIVELY.



UNIVERSITY OF ARKANSAS
COMPUTER GENERATED MAP

LABOR FORCE ESTIMATES
August 1981

State and SMSA's	Civilian Labor Force	Unemployment Rate	Total Employment
UNITED STATES	107,771,000	7.2	100,013,000
STATE OF ARKANSAS	1,024,700	8.3	939,000
Fayetteville-Springdale SMSA (Benton & Washington Counties)	79,000	5.4	74,750
Fort Smith SMSA (Crawford & Sebastian Counties in Arkansas and LeFlore & Sequoyah Counties in Oklahoma)	85,750	8.1	78,800
Little Rock-North Little Rock SMSA (Pulaski & Saline Counties)	197,000	7.5	182,300
Pine Bluff SMSA (Jefferson County)	41,075	9.9	37,025

	Civilian Labor Force	Unemployment Rate	Total Employment	County	Civilian Labor Force	Unemployment Rate	Total Employment
Arkansas	12,500	6.4	11,700	Lee	5,275	13.3	4,575
Ashley	10,525	7.6	9,725	Lincoln	4,050	9.3	3,675
Baxter	9,425	5.6	8,900	Little River	5,250	11.0	4,675
Benton	32,575	5.1	30,925	Logan	7,425	8.8	6,775
Boone	11,650	6.9	10,850	Lonoke	16,950	6.0	15,925
Bradley	5,300	9.4	4,800	Madison	6,400	5.9	6,025
Calhoun	2,300	8.7	2,100	Marion	6,725	3.7	6,475
Carroll	7,450	4.7	7,100	Miller	14,250	9.5	12,900
Chicot	7,025	8.2	6,450	Mississippi	27,025	11.2	24,000
Clark	9,775	10.2	8,775	Monroe	5,825	9.4	5,275
Clay	9,050	9.4	8,200	Montgomery	2,900	9.5	2,625
Cleburne	6,575	8.4	6,025	Nevada	4,650	8.1	4,275
Cleveland	2,125	10.6	1,900	Newton	3,350	8.2	3,075
Columbia	12,850	6.8	11,975	Ouachita	12,175	10.5	10,900
Conway	8,100	7.1	7,525	Perry	3,275	8.4	3,000
Craighead	31,450	7.9	28,975	Phillips	13,750	10.9	12,250
Crawford	15,550	8.8	14,175	Pike	4,600	7.6	4,250
Crittenden	24,175	7.1	22,450	Poinsett	11,450	13.5	9,900
Cross	9,550	8.1	8,775	Polk	6,000	12.9	5,225
Dallas	4,000	8.1	3,675	Pope	18,175	11.0	16,175
Desha	7,900	9.2	7,175	Prairie	3,925	10.2	3,525
Drew	8,775	7.7	8,100	Pulaski	172,275	7.4	159,525
Faulkner	21,475	7.7	19,825	Randolph	7,600	10.5	6,800
Franklin	6,425	9.7	5,800	St. Francis	13,875	13.0	12,075
Fulton	3,125	11.2	2,775	Saline	24,725	7.9	22,775
Garland	29,600	9.7	26,725	Scott	3,150	9.5	2,850
Grant	4,375	8.6	4,000	Searcy	2,950	11.0	2,625
Greene	14,500	8.6	13,250	Sebastian	42,625	9.7	38,475
Hempstead	11,350	6.8	10,575	Sevier	5,725	9.2	5,200
Hot Spring	11,625	12.0	10,225	Sharp	4,500	10.0	4,050
Howard	7,650	7.2	7,100	Stone	3,750	6.7	3,500
Independence	16,325	8.4	14,950	Union	24,025	5.2	22,775
Izard	4,375	7.4	4,050	Van Buren	4,350	9.8	3,925
Jackson	9,675	11.9	8,525	Washington	46,425	5.6	43,825
Jefferson	41,075	9.9	37,025	White	22,600	8.8	20,600
Johnson	7,675	7.5	7,100	Woodruff	4,750	9.5	4,300
Lafayette	4,050	9.9	3,650	Yell	7,825	6.7	7,300
Lawrence	8,200	10.4	7,350				

Source: The Research and Statistics Section, Arkansas Employment Security Division.

APR 22 1982 U 5930-1 (A)

Arkansas Business and Economic Review

A Publication of the University of Arkansas

Winter 1981

contents

Arkansas Personal Income, 1979

Market Indices and Beta Variability

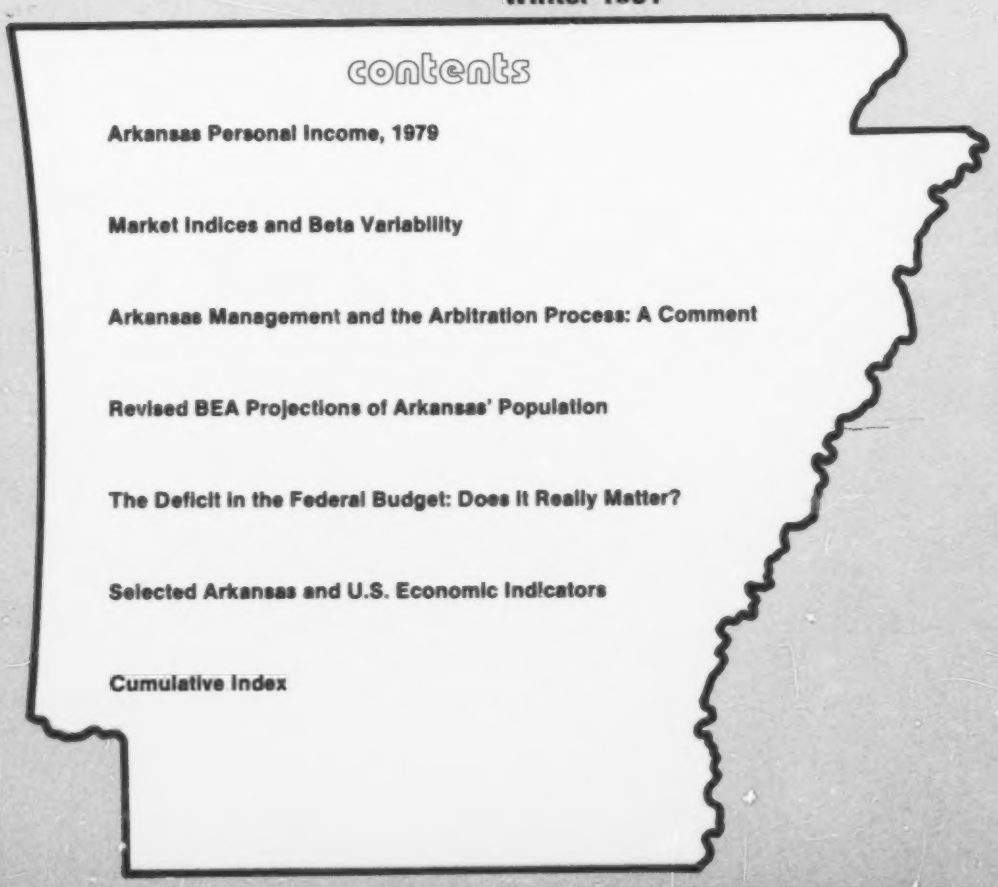
Arkansas Management and the Arbitration Process: A Comment

Revised BEA Projections of Arkansas' Population

The Deficit in the Federal Budget: Does It Really Matter?

Selected Arkansas and U.S. Economic Indicators

Cumulative Index



Arkansas Business and Economic Review

B. A. NUGENT
Chancellor, University of Arkansas, Fayetteville

JOHN P. OWEN
Dean, College of Business Administration

PHILLIP H. TAYLOR
Director, Bureau of Business and Economic Research

JOSEPH A. ZIEGLER
Senior Research Associate

HARRY FRENCH
Associate Economist

HELEN MCGREW
Research Assistant

DANA WARD
Research Assistant

WILLIAM FLYNN
Office Manager

SHERRYL E. LAUBACH
Compositor

LISA M. SADLER
Secretary

QUINTON GEANS
Office Assistant

The *Arkansas Business and Economic Review* is published quarterly by the College of Business Administration as a public service and mailed on request without charge to addresses in the U.S. The articles published do not necessarily represent points of view of the Editor or the University.

The College of Business Administration is fully accredited by the American Assembly of Collegiate Schools of Business. The Bureau of Business and Economic Research is a member of the Association for University Business and Economic Research and The Travel Research Association.

The cover design was created by Printing Services, University of Arkansas.

Reprints of *Review* articles are available from the Bureau at a rate of $1.00 for the first copy and 50 cents for each additional copy.

NOTICE

Individuals wishing to be added to the mailing list should send name, address and zip code to the Bureau of Business and Economic Research. If you are moving and wish to continue to receive the *Arkansas Business and Economic Review*, please send us the address label and your new address.

TABLE OF CONTENTS

Volume 14 Number 4 WINTER 1981

PAGE

Arkansas Personal Income, 1979 1

Timothy P. Cronan
Assistant Professor of Data Processing and Quantitative Analysis
University of Arkansas, Fayetteville

Robert W. Strand
Assistant Professor of Finance
University of Arkansas, Fayetteville

Market Indices and Beta Variability 12

Ladd Michael Kochman
Assistant Professor of Finance
University of North Carolina, Wilmington

Ravija Badarinathi
Lecturer
University of North Carolina, Wilmington

Arkansas Management and the Arbitration Process: A Comment 18

Jack E. Adams
Professor of Economics
University of Arkansas, Little Rock

Revised BEA Projections of Arkansas' Population 20

Phillip H. Taylor
Director, Bureau of Business and Economic Research
University of Arkansas, Fayetteville

The Deficit in the Federal Budget: Does it Really Matter? 21

Thomas R. McKinnon
Director, Bessie B. Moore Center for Economic Education
University of Arkansas, Fayetteville

Selected Arkansas and U.S. Economic Indicators 23

Cumulative Index 38

REVIEW EDITORAL POLICY STATEMENT

In an effort to ensure that the articles appearing in the *Review* meet standards consistent with the goals of the College of Business Administration and of the University of Arkansas, an Editoral Advisory Board has been created to referee manuscripts submitted for publication. The current members of the Board are:

Jack E. Adams, University of Arkansas, Little Rock
Phillip W. Balsmeier, Louisiana Tech University
Michael W. Butler, University of North Alabama
G. James Francis, Colorado State University
David E. R. Gay, University of Arkansas, Fayetteville
John Kane, University of Arkansas, Fayetteville
Dale A. Level, University of Arkansas, Fayetteville
Harvey Lewis, University of Mississippi
John E. McCain, University of Arkansas, Fayetteville
James Millar, University of Arkansas, Fayetteville
C. P. Rao, University of Arkansas, Fayetteville
Eugene Sauls, California State University–Chico
Lloyd Seaton, Jr., University of Arkansas, Fayetteville
Donald White, University of Arkansas, Fayetteville
Joseph Ziegler, University of Arkansas, Fayetteville

The *Arkansas Business and Economic Review* is dedicated to information relevant to the business and economic environment of Arkansas. Manuscripts are solicited in these general subject areas:

1. Problems and issues of the Arkansas business community and economy;

2. Regional and industrial problems that have implications for the Arkansas economic community;

3. National business and economic issues of general interest to the people of Arkansas; and

4. Business and economic theory.

As a minimum, to be accepted for publication a manuscript must have literary value and the research upon which it is premised must have been conducted in a scientifically valid manner. Thereafter, the order of enumeration of the subject areas designates the system of priorities that will be applied in ascertaining the publishability of a manuscript. (However, the system of priorities will not be applied in such a way as to completely exclude any of the four categories of articles.)

Form requirements for manuscripts include double spaced originals with each chart or graph prepared in ink (camera ready) on a separate sheet. Manuscripts and all inquiries should be addressed to Editor, *Arkansas Business and Economic Review,* Bureau of Business and Economic Research, College of Business Administration, University of Arkansas, Fayetteville, Arkansas 72701, Telephone (501) 575-4151.

ARKANSAS PERSONAL INCOME, 1979

Timothy P. Cronan
Assistant Professor of Data Processing
and Quantitative Analysis
University of Arkansas, Fayetteville

Robert W. Strand
Assistant Professor of Finance
University of Arkansas, Fayetteville

INTRODUCTION

The Bureau of Economic Analysis (BEA) recently released 1979 personal income and employment information for the State of Arkansas. Consequently, the purpose of this study is to present, in a series of articles, relevant Arkansas personal income and employment information for 1979 based upon the BEA data.

This article presents Part I: an analysis of personal income information for the State of Arkansas and the eight counties with the greatest personal income. Succeeding articles will present personal income information for other Arkansas counties as well as Arkansas employment information.

PERSONAL INCOME, STATE OF ARKANSAS

Economic analysis in today's business decision-making process requires personal income data. The data should include county personal income figures as well as Arkansas figures. Table 1 presents 1979 personal income data for the United States and the State of Arkansas by type and by industry.[1] Total income by place of work for Arkansas in 1979 was $11,186,966,000, which constituted only 0.75 percent of the nation's total income of $1,484,841,000,000. Also presented in Table I, by type and by industry is personal income for Arkansas as a percentage of the United States personal income.

Arkansas represents about one and one half percent of the nation's land area, but Table 1 shows that the State in 1979 was less densely populated than was the nation, on average. In 1979, the State held only about one percent of the nation's population. In 1979 per capita income for Arkansas was $6,953 or 79.4 percent of the nation's $8,757 per capita income. However, most of the Arkansas personal income categories represented only between 0.6 and 0.8 percent of corresponding national categories. Notable deviations from this range were "Proprietors Farm Income" and "Private Farm Industry" being, respectively, 3.5 and 2.9 percent of national levels and far above the population proportion. These figures represent the agricultural bias of the State.

The five leading commodities produced in the State are broiler chickens, cattle and calves, cotton lint, rice, and soybeans.[2] Arkansas leads the nation in rice and broiler production and is one of the top ten states in the commercial production of spinach, eggs, cotton, soybeans, turkeys, tomatoes, grapes, lespedeza seeds, and grain sorghum.[3]

TABLE 1

PERSONAL INCOME IN THE UNITED STATES AND ARKANSAS
BY TYPE AND INDUSTRY, 1979

	United States	Arkansas	% Ark. of U.S.
Wage and Salary Disbursements	$1,234,660,000	$ 8,434,463	0.68
Other Labor Income	122,682,000	908,981	0.70
Proprietors Income	127,499,000	1,843,522	1.45
Farm	28,180,000	988,988	3.51
Nonfarm	99,319,000	854,534	0.86
Farm	37,394,000	1,089,385	2.91
Nonfarm	1,447,447,000	10,097,581	0.70
Private	1,210,258,000	8,473,535	0.70
Agri Services	6,214,000	54,952	0.88
Mining	24,573,000	113,561	0.46
Construction	90,788,000	723,028	0.80
Manufacturing	387,670,000	2,982,075	0.77
Nondurable Goods	133,839,000	1,313,135	0.98
Durable Goods	253,831,000	1,668,940	0.66
Transportation, Public Utilities	114,662,000	869,341	0.76
Wholesale Trade	99,951,000	645,569	0.65
Retail Trade	147,335,000	1,137,160	0.77
Finance, Insurance, Real Estate	86,326,000	489,308	0.57
Services	253,639,000	1,458,441	0.56
Government, Government Enterprises	237,189,000	1,624,046	0.69
Federal, Civilian	56,431,000	344,521	0.61
Federal, Military	20,909,000	159,073	0.76
State and Local	159,849,000	1,120,452	0.70
Total Income by Place of Work	1,484,841,000	11,186,966	0.75
Less: Social Insurance	80,204,000	629,585	0.79
Net Income by Place of Work	1,404,637,000	10,557,381	0.75
Plus: Residence Adjustment	412,000	5,461	1.33
Net Income by Residence	1,404,225,000	10,551,920	0.75
Plus: Dividends, Interest, Rent	271,750,000	2,102,673	0.77
Plus: Transfer Payments	251,020,000	2,504,584	1.00
Personal Income by Residence	1,927,000,000	15,159,177	0.79
Per Capita Income	8,757	6,953	79.40
Total Population (100's)	220,062,351	2,180,274	0.99

PERSONAL INCOME IN ARKANSAS COUNTIES, GENERAL

Personal Income by place of residence and population data for Arkansas counties are presented in Table 2 along with county population and personal income as a percentage of Arkansas personal income. County per capita income is also compared to State per capita income.

The eight counties with the greatest personal income and population were selected for further analysis of Labor and Proprietor's Income by type and by industry. These eight counties are Benton, Craighead, Garland, Jefferson, Mississippi, Pulaski, Sebastian, and Washington. (See Figure 1).

Each had more than three percent of the State's population and more than two and a half percent of the

TABLE 2

PERSONAL INCOME, POPULATION, AND PER CAPITA INCOME FOR ARKANSAS COUNTIES, 1979

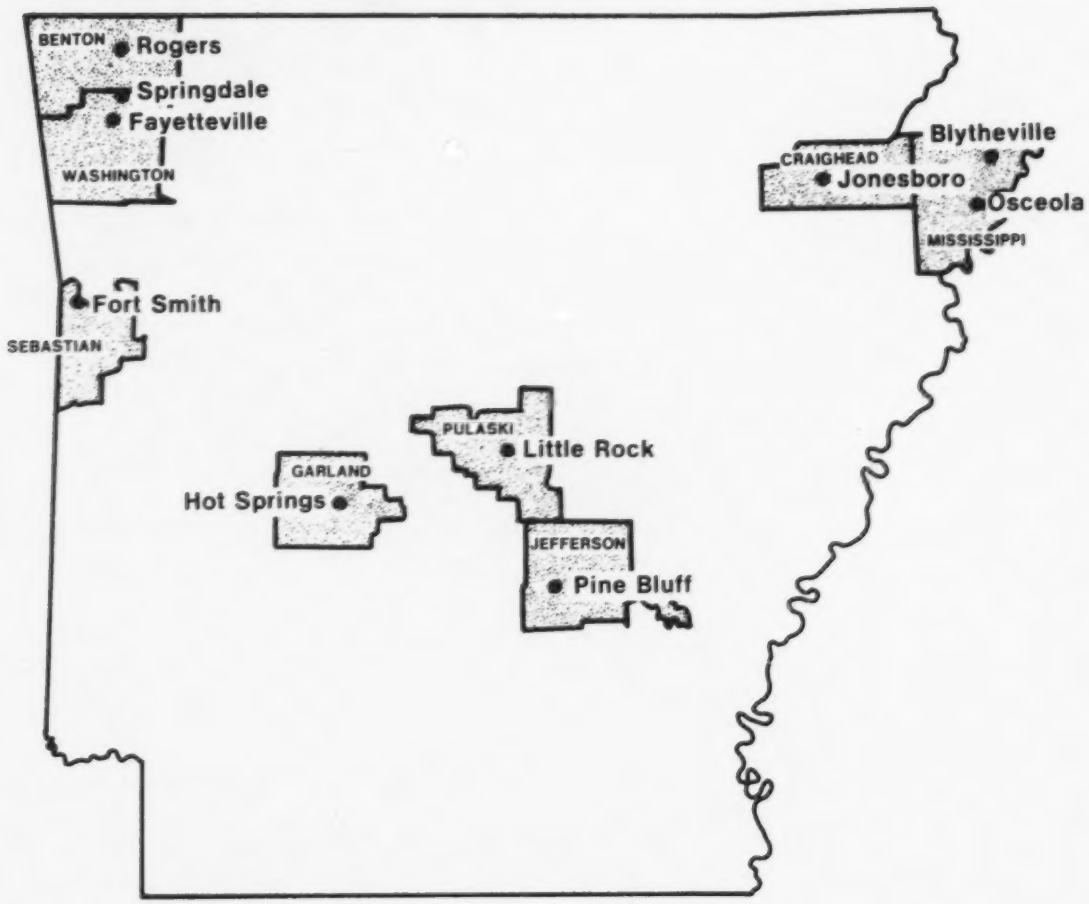
(Counties in alphabetical order)

County	Rank*	Population	Percent of State Population	Personal Income by Residence ($1,000)	Percent of State Personal Inc.	Per Capita Income	Excess of County Over State PCI
Arkansas	17	23,540	1.08	$ 200,778	1.32	$8,529	$+1,576
Ashley	29	25,589	1.17	161,121	1.06	6,296	- 657
Baxter	26	25,065	1.15	181.595	1.20	7,245	+ 292
Benton	5	66,897	3.07	538,351	3.55	8,047	+1,094
Boone	25	25,777	1.18	182,431	1.20	7,077	+ 124
Bradley	50	12,848	0.59	83,023	0.55	6,462	- 491
Calhoun	74	5,654	0.26	30,953	0.20	5,475	- 1,478
Carroll	39	14,715	0.67	102,983	0.68	6,999	+ 46
Chicot	47	17,532	0.80	89,440	0.59	5,102	- 1,851
Clark	30	22,044	1.01	146,352	0.97	6,639	- 314
Clay	34	20,143	0.92	134,680	0.89	6,686	- 267
Cleburne	46	15,830	0.73	92,604	0.61	5,850	- 1,103
Cleveland	69	6,996	0.32	40,950	0.27	5,853	- 1,100
Columbia	28	26,273	1.21	167,382	1.10	6,371	- 582
Conway	36	18,363	0.84	113,580	0.75	6,185	- 768
Craighead	7	61,729	2.83	431,194	2.84	6,985	+ 32
Crawford	18	34,326	1.57	200,761	1.32	5,849	- 1,104
Crittenden	10	52,284	2.40	317,272	2.09	6,068	- 885
Cross	31	20,396	0.94	141,887	0.94	6,957	+ 4
Dallas	59	10,253	0.47	63,293	0.42	6,173	- 780
Desha	37	18,608	0.85	111,559	0.74	5,995	- 958
Drew	40	16,750	0.77	101,612	0.67	6,066	- 887
Faulkner	13	41,817	1.92	271,300	1.79	6,488	- 465
Franklin	49	13,632	0.63	84,126	0.55	6,171	- 782
Fulton	68	8,964	0.41	46,986	0.31	5,242	- 1,711
Garland	6	65,196	2.99	459,089	3.27	7,594	+ 641
Grant	55	12,576	0.58	78,939	0.52	6,277	- 676
Greene	22	30,940	1.42	186,764	1.23	6,036	- 917
Hempstead	33	21,053	0.97	138,490	0.91	6,578	- 375
Hot Spring	27	25,075	1.15	176,639	1.17	7,044	+ 91
Howard	42	13,631	0.63	96,750	0.64	7,098	+ 145
Independence	21	27,829	1.28	187,650	1.24	6,743	- 210
Izard	63	10,214	0.47	59,733	0.39	5,848	- 1,105
Jackson	32	20,988	0.96	140,873	0.93	6,712	- 241
Jefferson	3	87,349	4.01	627,583	4.14	7,185	+ 232
Johnson	45	16,634	0.76	93,723	0.62	5,634	- 1,319

TABLE 2 (Cont.)

County	Rank*	Population	Percent of State Population	Personal Income by Residence ($1,000)	Percent of State Personal Inc.	Per Capita Income	Excess of County Over State PCI
Lafayette	65	9,095	0.42	$ 56,208	0.37	$6,180	$- 773
Lawrence	35	18,666	0.86	121,722	0.80	6,521	- 432
Lee	54	16,551	0.76	80,138	0.53	4,842	- 2,111
Lincoln	58	13,105	0.60	66,922	0.44	5,107	1,846
Little River	43	12,879	0.59	96,437	0.64	7,488	+ 535
Logan	38	18,631	0.85	108,340	0.71	5,815	- 1,138
Lonoke	15	34,178	1.57	237,515	1.57	6,949	- 4
Madison	64	10,551	0.48	59,033	0.39	5,595	- 1,358
Marion	61	11,554	0.53	60,335	0.40	5,222	- 1,731
Miller	14	33,188	1.52	253,895	1.67	7,650	+ 697
Mississippi	8	63,565	2.92	396,161	2.61	6,232	- 721
Monroe	52	14,354	0.66	82,217	0.54	5,728	- 1,225
Montgomery	71	6,412	0.29	38,571	0.25	6,015	- 938
Nevada	60	10,875	0.50	61,522	0.41	5,657	- 1,296
Newton	75	7,034	0.32	26,986	0.18	3,837	- 3,116
Ouachita	19	29,065	1.33	197,855	1.31	6,807	- 146
Perry	70	7,627	0.35	39,501	0.26	5,179	- 1,774
Phillips	20	36,990	1.70	192,378	1.27	5,201	- 1,752
Pike	66	9,912	0.45	53,840	0.36	5,432	- 1,521
Poinsett	24	27,786	1.27	185,560	1.22	6,678	- 275
Polk	48	14,853	0.68	86,559	0.57	5,828	- 1,125
Pope	16	35,632	1.63	225,319	1.49	6,324	- 629
Prairie	57	9,685	0.44	70,100	0.46	7,238	+ 285
Pulaski	1	328,164	15.05	2,906,084	19.17	8,856	+1,903
Randolph	41	17,099	0.78	98,688	0.65	5,772	- 1,181
St. Francis	23	30,863	1.42	185,882	1.23	6,023	- 930
Saline	11	46,853	2.15	302,514	2.00	6,457	- 496
Scott	67	8,716	0.40	49,570	0.33	5,687	- 1,266
Searcy	73	8,274	0.38	36,911	0.24	4,461	- 2,492
Sebastian	2	88,558	4.06	740,818	4.89	8,365	+1,412
Sevier	51	12,239	0.56	82,527	0.54	6,743	- 210
Sharp	56	12,670	0.58	76,652	0.51	6,050	- 903
Stone	72	9,028	0.41	37,244	0.25	4,125	- 2,828
Union	9	46,664	2.14	374,792	2.47	8,032	+1.079
Van Buren	62	11,482	0.53	59,902	0.40	5,217	- 1,736
Washington	4	94,715	4.34	165,224	4.06	6,496	- 457
White	12	48,012	2.20	302,237	1.99	6,295	- 658
Woodruff	53	11,396	0.52	80,144	0.53	7,033	+ 80
Yell	44	15,843	0.73	94,428	0.62	5,960	- 993

Figure 1
Selected Arkansas Counties



State's personal income (by residence). Pulaski County had 3.7 and 3.9 times the next largest county's population and personal income, respectively. The per capita income for these eight counties averaged $517 more than the State average, with Pulaski, Sebastian, and Benton being the first, third, and fourth highest in the State in this category. Of the eight, Mississippi and Washington counties fell below the State average.

DISTRIBUTION OF PERSONAL INCOME

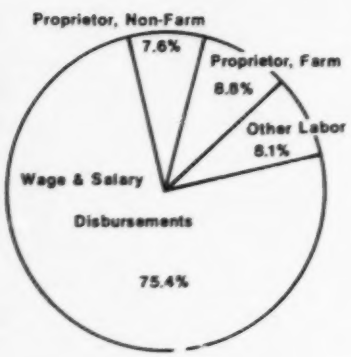
Pie charts illustrating personal income by type and by industry for the State of Arkansas and the eight counties listed above are presented in Figures 2, 3, and 4.

Review of the personal income distribution by type of income (Figure 2) reveals both differences and similarities between the eight major counties. "Wages and salary disbursements" represented about three fourths of Arkansas personal income. But figures for five of the eight counties were 5.7 to 10.3 percent higher than for the State with Pulaski county having the highest at 85.7 percent. Perhaps these counties are the largest eight in income because they are, for the most part, higher in the wage and salary category and lower in that of the lower-paying farm income. The pie charts support this hypothesis, with farm proprietorships providing nine percent of Arkansas personal income but 0.2 to 2.2 percent less for the same five counties. Benton and Craighead counties followed the State figures fairly closely but Mississippi county's figures ran counter to the majority of the leading eight by being low in the wage and salary category but high for farm proprietorships. The eight major counties approximated the state's figures in the proportions of personal income attributable to "Other

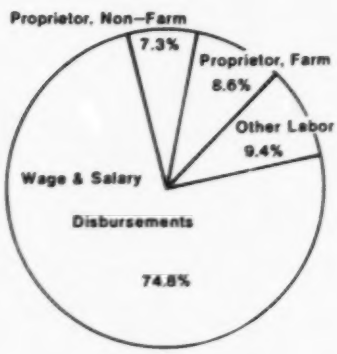
Figure 2

Distribution of Personal Income by Type

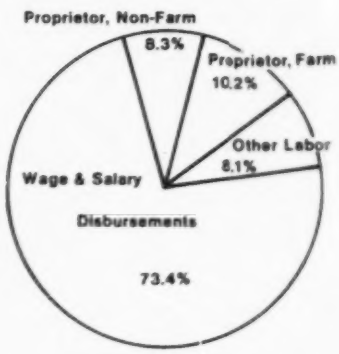
State of Arkansas



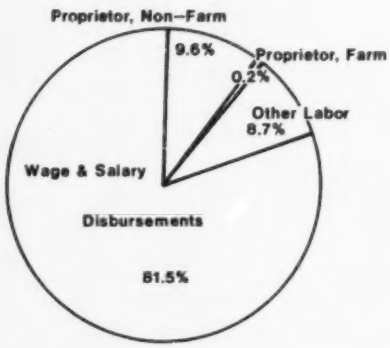
Benton County



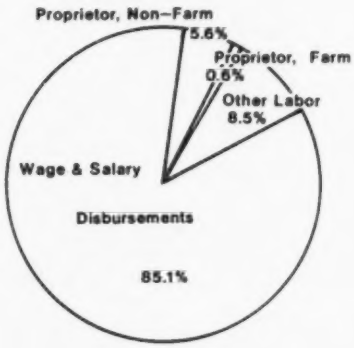
Craighead County



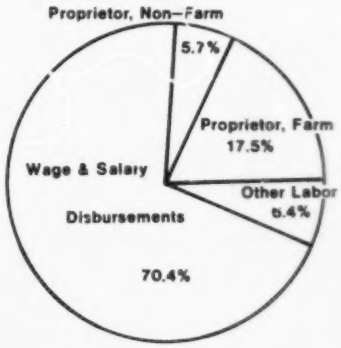
Garland County



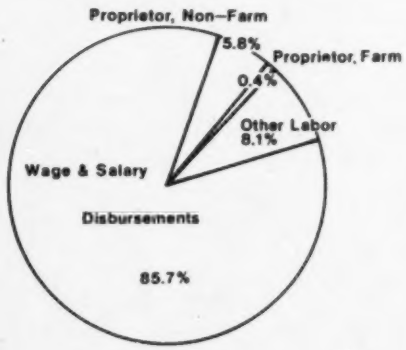
Jefferson County



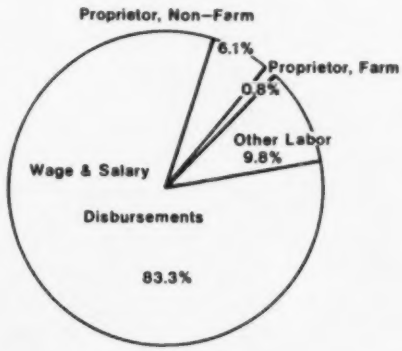
Mississippi County



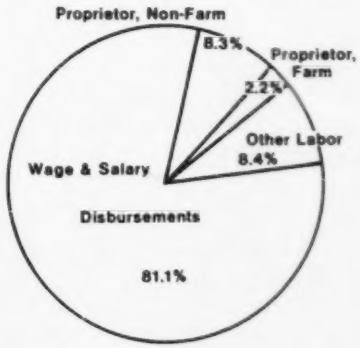
Pulaski County



Sebastian County



Washington County



Labor" and "Non-Farm Proprietorships." Other Labor sources ranged from a low of 6.4 percent for Mississippi county to a high of 9.8 percent for Sebastian county, close to the State's 8.1 percent figure. Non-farm Proprietorship sources ranged from a low of 5.6 percent for Jefferson county to a high of 9.6 percent for Garland county, again close to the State's 7.6 percent.

Analysis of the distribution of 1979 Arkansas personal income by industry (Figure 3) reveals much more dissimilarity than did the by type review. Of the income from nongovernment sources, Mississippi county again deviated from the trend set by most of the other eight counties, since its income came, to a much greater extent, from farm sources (19.6 percent) and to a much lesser extent from non-farm sources (57.0 percent). These clearly differed from the corresponding State figures of 9.7 and 75.8 percent, respectively. This county sits on the fertile banks of the Mississippi River and has more potential for farming than do the other seven major counties. The other seven generally exceeded the State in the portion of income coming from non-farm sources and fell short in the portion coming from farm sources.

For the State as a whole, 14.5 percent of the income came from government sources. Washington county was 3.2 percent higher than the State, no doubt due principally to the location in Fayetteville of the University of Arkansas and the Veterans Administration Hospital. Pulaski county was 6.6 percent higher than the State, due largely to the county's being the seat of the State's government, the University of Arkansas campus in Little Rock, and the Little Rock Air Force Base. Mississippi County has the highest portion of income (23.3 percent) coming from government sources of any county with the Blytheville Air Force Base having much to do with this extreme. Benton and Sebastian counties (7.3 and 7.0 percent) are far below the state level in their portions of total income coming from government sources.

Differences in distributions of the "Private, Non-Farm" category of personal income distribution by industry (Figure 4) can be explained by review of the dominant firms and principal functions of the eight largest counties. Most of these eight counties had a smaller percentage of "Private, Non-Farm" income in "Finance, Insurance, and Real Estate," "Mining," "Transportation and Public Utilities," and "Wholesale Trade" than was true of the State as a whole. Benton county followed this trend. This county made up for this lower income by exceeding State percentages in both manufacturing categories. The operations of Allen Canning Company, Emerson Electric Company, and Victor Comptometer Corporation (Daisy Division) in this county could explain these figures. In addition to trailing the State in the above mentioned four categories, Craighead county was significantly below the State percentage in the "Manufacturing, Nondurables" category. Yet, Craighead was high in "Manufacturing, Durables" and, to a lesser extent, "Services." The presence of five firms engaged in durable manufacturing –General Electric Company, Colson Company, Craine Company, Ford Motor Company Agricultural Machinery Division, and Walker Manufacturing Company–explains this high.

Garland County fell behind statewide percentages in three of the four categories (as did the majority of the other eight). In addition, Garland fell behind in "Wholesale Trade" and, especially, "Manufacturing, Nondurables." But this county exceeded the State percentages in "Mining," "Retail Trade," "Manufacturing, Durables," and, especially, "Services." The minerals and tourist trade of Hot Springs might explain why the first, second, and especially, fourth of these categories were abnormally high. Feather-Lite Manufacturing Company, Inc.; National Rejectors Industries; and Weyerhauser Company, Inc., operations help explain why the "Manufacturing, Durables" category was high. Jefferson county was below State percentages in both trade categories and durable manufacturing as well as in three of the four that most of the eight counties were short in. But this county exceeded State percentages in "Transportation and Public Utilities" as well as "Manufacturing, Nondurables" and, to a greater extent, "Construction." International Paper Company and Southern Kraft Division are the leading nondurable manufacturers in this county.

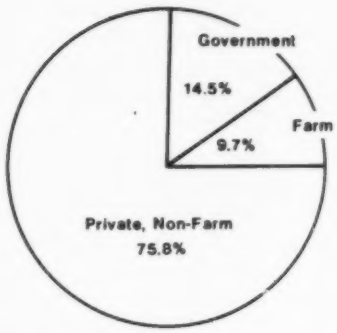
Like Benton county, Mississippi county had a lower percentage of its private, non-farm income from the four previously mentioned categories (and, in addition, "Construction," but there was a data disclosure problem for this county) and higher percentages in both manufacturing categories. Five nondurable manufacturers, American Greeting Corporation; Brown Shoe Company; Crompton Osceola Financial Company, Inc.; Osceola Shoe Company, Inc.; and Union Carbide Films, (Packaging Division) and one durable manufacturer, Randall Company, are important in Mississippi county.

Pulaski county, the seat of the State government, exceeds State percentages in "Finance, Insurance, and Real Estate," "Services," "Transportation and Public Utilities," and "Wholesale Trade" and falls far behind State percentages in both manufacturing categories. In Sebastian county, the operations of Whirlpool Corporation; Fort Smith Furniture Division of DeSoto, Inc.; Rheem Manufacturing Company; and Riverside Furniture Corporation help explain why this county was so high in the durable manufacturing category, compensating for lower income, relative to the statewide percentages of private, non-farm income, in nondurable manufacturing and in the other four categories in which most of the eight counties were low.

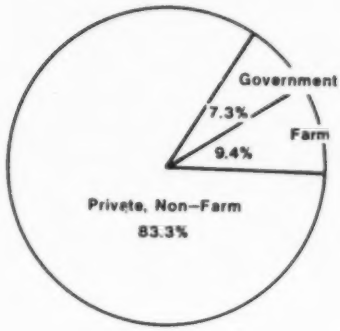
Figure 3

Distribution of Personal Income by Industry

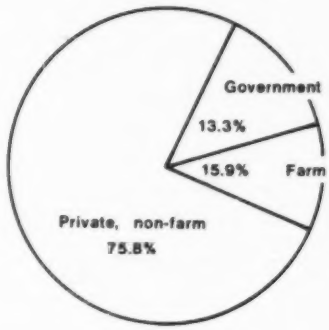
State of Arkansas



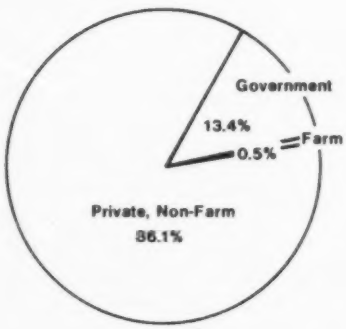
Benton County



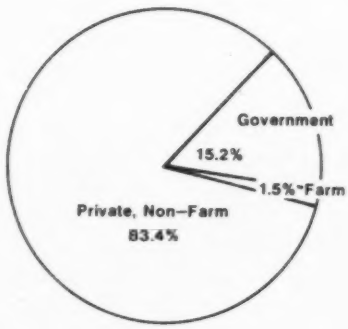
Craighead County



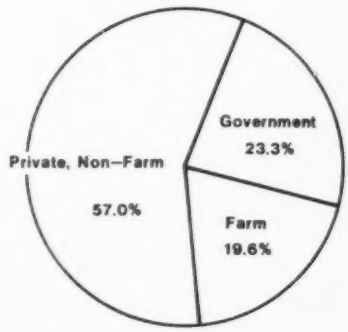
Garland County



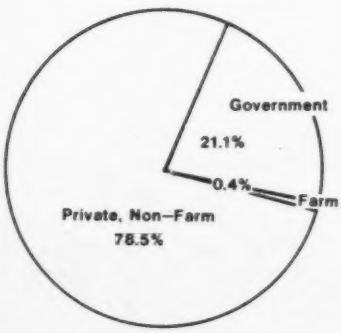
Jefferson County



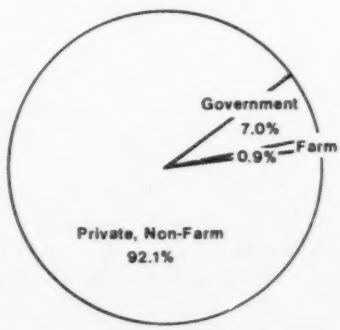
Mississippi County



Pulaski County



Sebastian County



Washington County

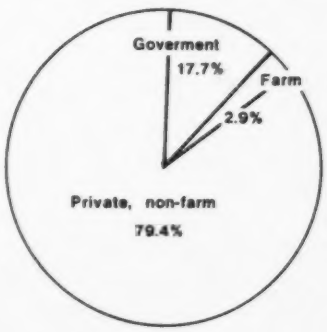
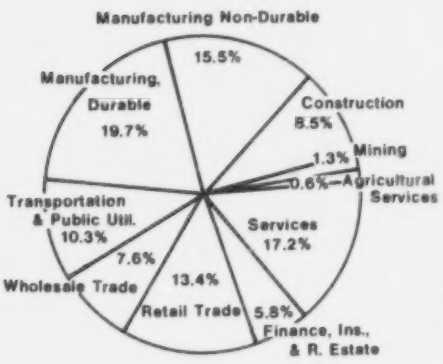


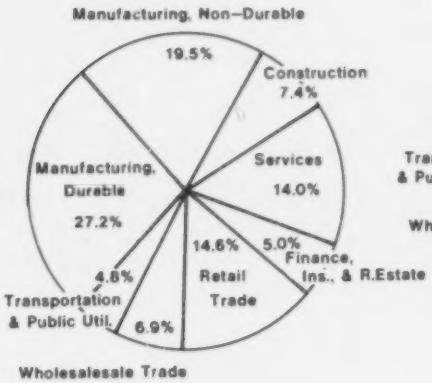
Figure 4

Distribution of Private, Non-farm Income

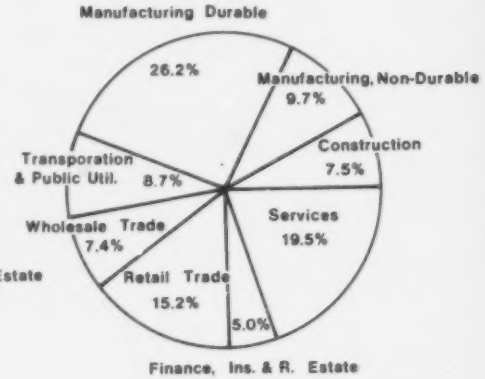
State of Arkansas



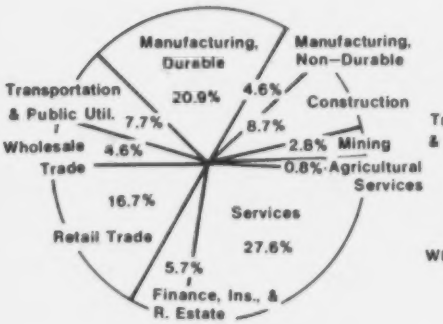
Benton County



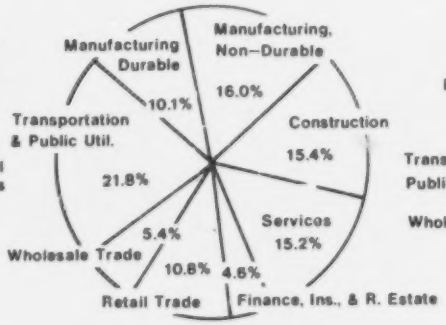
Craighead County



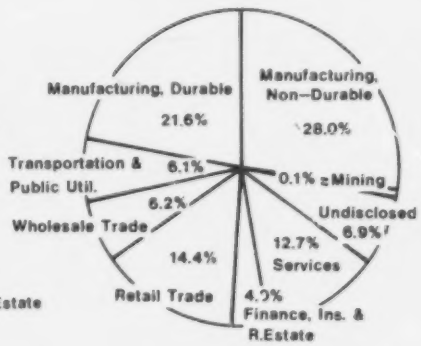
Garland County



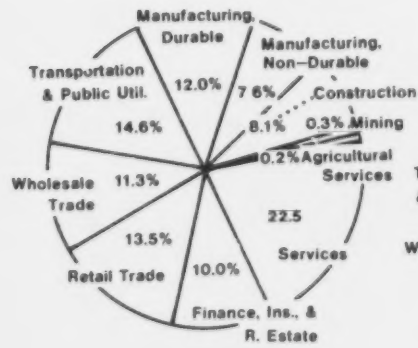
Jefferson County



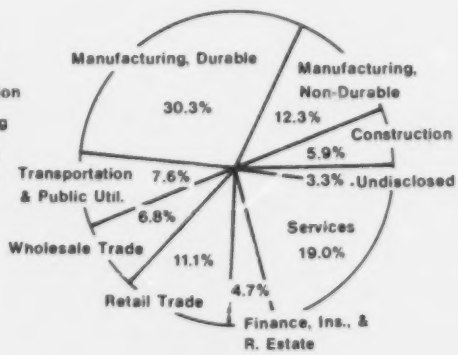
Mississippi County



Pulaski County



Sebastian County



Washington County

Washington county had lower percentages in "Mining," "Finance, Insurance, and Real Estate," and, especially, "Manufacturing, Durables" but higher percentages in "Wholesale Trade," "Transportation and Public Utilities," and "Manufacturing, Nondurables" as portions of personal income attributable to "Private, Non-Farm" industry than did the State. Campbell Soup Company and Tyson Foods. are the largest nondurable manufacturers in this county.

SUMMARY

Part I has presented personal income by type of income and by industrial classification for the State of Arkansas and the eight counties with the greatest personal income and population. Personal income by type and by industry for the State of Arkansas was presented in comparison with that of the United States. Population, personal income by residence, and per capita income were presented for all Arkansas counties. In addition, pie charts revealed personal income information by type and by industry for eight selected counties. Personal income figures were presented in comparison with the State and other counties. Attempts were made to explain deviations from State averages.

FOOTNOTES

[1]Appendix I contains a description of personal income information.

[2]Ozarks Regional Commission, *1981 State Development Plan Update*, September 1981, p. 93.

[3]Ozarks Regional Commission, *1980 Arkansas State Development Plan*, September 1980, p. 73.

REFERENCES

Arkansas. Department of Local Services. *County Profiles.* Benton County. Little Rock, Arkansas: The Department, 1977.

_____. *County Profiles.* Craighead County. Little Rock, Arkansas: The Department, 1977.

_____. *County Profiles.* Garland County. Little Rock, Arkansas: The Department, 1977.

_____. *County Profiles.* Jefferson County. Little Rock, Arkansas. The Department, 1977.

_____. *County Profiles.* Mississippi County. Little Rock, Arkansas. The Department, 1977.

_____. *County Profiles.* Pulaski County. Little Rock, Arkansas. The Department, 1977.

_____. *County Profiles.* Sebastian County. Little Rock, Arkansas. The Department, 1977.

_____. *County Profiles.* Washington County. Little Rock, Arkansas: The Department, 1977.

Ozarks Regional Commission. *1980 Arkansas State Development Plan.* (by Office of the Governor and Arkansas Department of Economic Development). September 1980.

_____. *1981 Arkansas State Development Plan Update.* (by Office of the Governor and Arkansas Department of Economic Development). September 1981.

APPENDIX I

Personal Income, State of Arkansas

The industries for which income data is available are:

Farm
Non-Farm
  Private
    Agricultural Services, Forestry, Fisheries, etc.
    Mining
    Construction
    Manufacturing
      Non-Durable Goods
      Durable
    Transportation and Public Utilities
    Wholesale Trade
    Retail Trade
    Finance, Insurance, and Real Estate
    Services
  Government
    Federal, Civilian
    Federal, Military
    State and Local

To obtain Personal Income by place of residence and Per Capita Income by place of residence, Total Labor and Proprietor's Income by place of work must be modified. The Bureau of Economic Analysis obtains Personal Income by place of residence as follows:

Total Labor and Proprietors' Income by Place of Work
  Less: Personal Contributions for Social Insurance by Place of Work

Net Labor and Proprietors' Income by Place of Work
  Plus: Residence Adjustment

Net Labor and Proprietors' Income by Place of residence
  Plus: Dividends, Interest, and Rent
  Plus: Transfer Payments

Personal Income by Place of Residence
  Per Capita Income
  Population

MARKET INDICES AND BETA VARIABILITY

Ladd Michael Kochman
Assistant Professor of Finance
University of North Carolina, Wilmington

Ravija Badarinathi
Lecturer
University of North Carolina, Wilmington

BACKGROUND

Even the most ardent supporters of beta theory will allow that measurement inconsistencies and the fact that stocks undergo changes in their market risk make beta a less-than-perfect measure of volatility. Another flaw is that betas with low coefficients of determination (ρ^2) can prove to be deceiving. Consider the example below.

Year	S & P 500	Stock X	Stock Y
1975	29.1%	30.0%	0.0%
1976	13.0%	10.0%	0.0%
1977	7.6%	-10.0%	0.0%
1978	1.7%	5.0%	-103.0%
1979	9.9%	15.0%	0.0%
		$\beta = 1.03$	$\beta = 1.03$
		$\rho = 0.97$	$\rho = 0.30$
		$\rho^2 = 0.94$	$\rho^2 = 0.09$

Since Stocks X and Y have a beta of 1.03, it seems fair to infer that both would move nearly point-for-point with the market. However, inasmuch as market movements explain less than 10% of the variance of Stock Y's price changes as compared with 94% for Stock X, only Stock X can be expected to approximate the market with any degree of consistency.

Another operational difficulty connected with beta theory is finding a representative surrogate for the market portfolio. The two most common surrogates, the Standard and Poor 500 and the Dow Jones Industrial Average, have both been criticized for lacking sufficient breadth to encapsulate market activity. While this paper seeks to establish that market proxies introduce an added dimension of beta instability, it does not intent to argue the relative merits of those proxies. Instead, the authors would want to show that a stock's beta can assume different values depending on the underlying market index and that those differences are both practically and statistically significant.

METHODOLOGY

The problem with using different market indices has largely been dismissed on the grounds that such indices are highly correlated and serve as perfect substitutes for one another. To test whether choosing a market index is an unimportant detail, the authors first identified seven stock averages:

1. Dow Jones Industrial Average
2. Dow Jones 65 Stocks
3. Standard and Poor 500 Stocks

4. Standard and Poor 400 Stocks
5. New York Stock Exchange Composite Index
6. Barron's 50 Stocks
7. Wilshire 5000 Stocks

Monthly rates of return for five successive years beginning January 1975 were then calculated for each index and were based on the percent-change formula below

$$(1) \qquad \frac{P_1 - P_0}{P_0}$$

where P_0 represents opening market average and P_1 represents closing market average. *Barron's* was the source for the data. Similarly, prices for four stocks were obtained and transformed into rates of return using Equation (1) where P = share price. The stocks were selected on the basis of historically high beta, National Semiconductor, low beta, ASA, and market beta, General Foods and General Motors.

The monthly stock returns for each stock were regressed on the corresponding returns for each market index. Slope coefficients, or betas, were computed by a Texas Instruments model 58C calculator.

Finally, the null hypothesis that for any stock the betas are equal was tested. Beta is estimated as follows:

$$(2) \qquad \hat{\beta} = \frac{\sum_{i=1}^{m}\sum_{j=1}^{n}(X_{ij} - \bar{X})(Y_{ij} - \bar{Y})}{\sum_{i=1}^{m}\sum_{j=1}^{n}(X_{ij} - \bar{X})^2}$$

An ANOVA table would take the following form:

Source	Sum of Sq.	D.F.	M.S.	F
$\hat{\beta}$	$SS(\hat{\beta})$	1	M1	$F1 = \frac{M1}{S^2}$
All $\hat{\beta}/\beta$	$\sum_i SS(\hat{\beta}) - SS(\hat{\beta})$	m - 1	M2	$F2 = \frac{M2}{S^2}$
Residual	by Subtraction	$n \cdot m - 2m$	S^2	
Total	$\sum_i\sum_j (Y_{ij} - \bar{Y})^2$	$n \cdot m - m$		

Returning to the null hypothesis, the only need is to compare F_2 with an appropriate percentage point of the F-distribution with (m-1), (n·m - 2m) degrees of freedom where m represents the number of market indices and n represents the number of observations. If the hypothesis is not rejected, then b is taken as the common slope of the regression lines.

FINDINGS

Table 1 exhibits the monthly returns from both the market averages and the stocks. It becomes apparent from Table 1 that there is little reason to doubt that the averages move in concert with one another. However, it is equally apparent from Table 2 that a high correlation does not preclude variable beta values for each of the four stocks. Ranges of those values are displayed in Table 3.

It is also clear that there are no important systematic differences among the seven indices in terms of stock betas. The Wilshire 5000 produces the highest beta for one stock and the lowest for another. The DJIA is responsible for the lowest betas in two instances while Barron's can claim the lowest beta in another. The S & P 500 produces the highest beta for three of the four stocks but by no more than 0.03 in any one instance. Table 4 assigns point values to the market indices on the basis of 7 for the highest beta for a particular stock, 6 for the second highest beta and so on. The point totals show that the S & P 500 tends to generate high beta values while the two least comprehensive indices (DJIA and Barron's) tend to generate low beta values. The relationship between index breadth and beta magnitude – as measured by the points awarded in Table 4 – is delineated in Figure 1.

The results of the statistical test indicate that the differences among the betas for National Semiconductor, General Foods and General Motors are significant at the 0.50 confidence level. For General Foods the beta differences are significant at the 0.75 level while the differences for National Semiconductor are significant at 0.975.

The practical significance of those differences in beta values is best illustrated by the capital asset pricing model where

(5) required rate = riskfree rate + (beta X excess market rate)

For example, if the riskfree rate were 10% and the excess market rate were 5%, General Foods would have a required rate of 14% using the DJIA or 15.3% with the S & P 500. Other contrasts include National Semiconductor's 20.3% (Barron's) versus 23.45% (S & P 500) and ASA's 12.25% (DJIA) versus 14.25% (Wilshire).

CONCLUSIONS

Notwithstanding the small number of stocks used in this study, certain useful insights seem to emerge.

TABLE 1

MONTHLY PERCENT RETURNS FOR MARKET INDICES AND STOCKS

	Market Indices							Stocks			
Month	NYSE Comp.	Bar-ron's 50	S & P 500	S & P 400	Dow Ind.	Dow 65	Wil-shire 5000	ASA	NSM	GF	GM
01/75	11.7	16.8	10.8	10.8	12.5	11.8	13.1		70.5	24.5	20.4
02/75	5.9	8.2	6.7	7.2	5.9	4.2	6.3		33.8	2.6	4.4
03/75	0.0	- 1.1	- 0.5	- 0.1	1.1	- 0.5	- 2.6		34.3	- 1.0	1.4
04/75	6.3	1.8	6.6	7.1	9.1	6.2	8.8		10.4	- 3.2	7.8
05/75	5.6	5.4	5.1	5.0	1.9	2.1	4.9		22.2	11.9	0.0
06/75	3.1	1.4	2.5	2.1	3.6	3.5	2.2	24.4	8.7	0.5	10.9
07/75	- 7.1	- 3.0	- 7.2	- 7.3	- 5.8	- 6.1	- 6.4	5.4	-17.2	- 5.3	7.0
08/75	- 3.3	- 1.0	- 2.9	- 2.8	- 0.3	- 1.1	- 3.3	-20.6	- 2.2	1.0	- 5.8
09/75	- 3.5	- 4.5	- 3.0	- 3.2	- 4.8	- 3.5	- 2.6	- 7.9	15.7	- 5.1	2.1
10/75	5.9	10.2	6.2	6.2	5.3	6.1	5.2	8.4	6.0	19.6	10.3
11/75	3.0	- 2.3	2.9	3.0	3.7	2.8	- 2.3	-17.1	- 8.1	- 1.3	3.6
12/75	0.2	3.7	0.3	0.1	0.3	1.4	4.7	5.1	6.2	0.5	3.4
01/76	11.6	15.4	11.0	11.3	13.1	12.3	10.5	5.8	26.9	7.2	10.6
02/76	- 0.2	0.0	- 0.8	- 0.6	0.4	0.5	0.5	- 7.0	- 8.5	- 5.3	1.9
03/76	1.9	4.2	2.2	2.3	1.9	1.4	2.6	-20.0	- 1.7	3.5	5.1
04/76	- 1.6	- 0.8	- 1.3	- 1.4	- 0.4	0.3	- 0.4	5.8	- 9.8	- 2.7	2.2
05/76	- 1.0	- 0.5	- 1.1	- 1.0	- 1.7	- 1.0	- 2.7	0.5	- 0.6	- 2.7	- 3.5
06/76	4.0	6.1	3.7	3.7	2.2	3.0	5.0	-15.3	18.9	6.2	0.6
07/76	- 0.3	- 3.9	- 0.4	- 0.7	- 1.3	- 0.4	- 0.5	-16.4	-33.7	9.1	- 0.5
08/76	0.7	1.6	0.8	0.8	0.4	0.4	0.2	-15.4	1.6	1.6	0.4
09/76	0.4	1.9	0.1	0.3	- 0.6	- 0.3	- 0.1	0.0	- 3.2	1.9	5.7
10/76	- 2.4	- 1.0	- 2.2	- 2.4	- 2.4	- 2.0	-2.9	12.7	-12.2	- 8.6	3.7
11/76	1.2	- 1.0	0.6	0.1	- 0.7	2.2	2.3	22.0	3.0	0.0	- 4.1
12/76	4.8	4.8	4.4	4.2	5.3	5.4	3.6	0.6	- 6.1	- 1.9	8.7
01/77	- 3.4	- 2.0	- 4.2	- 4.2	- 4.1	- 3.4	- 2.0	-16.8	-33.0	5.4	- 4.5
02/77	- 1.9	- 1.0	- 1.8	- 1.6	- 1.4	- 1.8	- 0.8	21.0	- 2.6	1.6	- 3.7
03/77	- 1.4	- 0.8	- 1.4	- 1.6	- 1.8	- 0.9	- 1.8	- 4.2	12.8	- 1.6	- 5.5
04/77	0.0	2.6	- 0.3	- 0.7	0.4	1.9	0.9	- 4.4	-12.0	0.4	3.8
05/77	- 1.8	- 3.6	- 2.0	- 2.4	- 2.6	- 1.2	- 1.1	- 2.1	1.4	8.3	- 4.0
06/77	3.7	2.7	3.3	3.1	0.7	1.2	3.2	- 4.5	10.8	- 2.3	2.0
07/77	- 1.2	- 2.1	- 1.0	- 1.2	- 2.3	- 1.9	- 2.0	6.6	6.1	6.7	0.5
08/77	- 2.4	- 3.2	- 2.3	- 2.1	- 3.0	- 4.0	- 1.2	- 5.4	1.1	- 6.8	- 2.7
09/77	- 0.1	- 0.5	- 0.1	- 0.1	- 1.5	- 0.5	- 1.0	18.6	- 7.4	0.0	4.8
10/77	- 5.3	- 6.1	- 5.6	- 5.5	- 5.3	- 5.3	- 4.4	- 3.4	-13.2	- 7.4	- 5.6
11/77	4.4	3.2	3.7	3.3	2.3	3.5	4.5	- 4.7	7.0	7.5	- 4.2
12/77	- 1.0	- 0.9	- 0.9	- 0.7	- 1.0	- 0.8	- 3.1	6.6	0.7	- 6.0	- 3.8

TABLE 1 (Cont.)

	Market Indices							Stocks			
Month	NYSE Comp.	Bar-ron's 50	S & P 500	S & P 400	Dow Ind.	Dow 65	Wil-shire 5000	ASA	NSM	GF	GM
01/78	- 3.9	- 1.4	- 4.1	- 4.0	- 5.3	- 4.6	- 1.6	- 2.9	1.3	- 4.2	- 4.5
02/78	- 2.6	- 4.1	- 3.0	- 3.3	- 4.0	- 3.6	- 2.0	1.2	-16.2	-10.9	- 0.9
03/78	2.0	4.6	1.5	1.4	1.0	1.3	4.0	- 1.8	10.5	3.8	3.9
04/78	10.0	7.0	10.4	11.0	12.4	9.6	7.0	- 3.6	34.4	7.2	8.1
05/78	0.4	2.7	- 0.3	- 0.3	- 0.4	- 0.4	2.2	1.9	4.1	8.2	- 6.7
06/78	- 2.1	- 4.8	- 2.3	- 2.4	- 3.3	- 2.5	- 2.9	3.6	- 6.1	- 1.7	- 3.1
07/78	5.9	10.6	5.9	6.0	5.9	6.2	9.3	22.5	12.6	4.3	5.5
08/78	3.4	0.8	3.0	3.2	2.2	2.4	1.1	6.3	9.8	- 0.4	- 0.2
09/78	- 1.0	- 0.7	- 0.7	- 0.5	- 0.9	- 1.5	- 0.4	4.8	- 5.1	1.5	1.6
10/78	- 7.2	- 9.5	- 5.9	- 5.7	- 5.0	- 6.9	- 9.2	-13.8	-17.1	- 2.7	- 2.0
11/78	0.0	- 1.9	- 0.6	- 0.7	- 2.0	- 1.2	1.4	-13.6	- 3.4	- 4.7	-10.3
12/78	0.3	4.2	0.5	0.9	0.0	- 0.9	3.1	5.7	- 1.1	4.0	- 0.9
01/79	3.8	2.2	3.3	3.2	3.6	3.5	1.0	9.4	- 9.5	8.5	2.5
02/79	- 3.0	- 3.7	- 3.1	- 3.1	- 3.0	- 2.7	- 1.2	2.0	- 4.2	- 5.6	- 4.0
03/79	4.5	5.8	4.1	4.3	4.8	4.9	6.4	- 3.5	13.2	- 1.7	4.8
04/79	1.1	- 2.3	0.8	1.0	0.0	0.0	- 1.8	3.4	- 0.6	0.0	3.1
05/79	- 2.3	- 1.6	- 2.5	- 3.1	- 4.0	- 1.5	- 1.1	6.4	19.9	-11.2	- 1.3
06/79	3.2	4.9	2.8	2.5	1.6	2.4	5.1	- 3.0	- 3.6	9.1	1.7
07/79	2.6	- 1.3	2.1	1.9	2.0	3.4	1.0	- 6.2	1.5	1.5	- 1.7
08/79	3.4	4.5	3.1	4.0	2.6	1.9	3.5	11.3	8.7	6.7	1.7
09/79	0.8	3.3	1.0	1.6	0.0	- 0.7	3.8	18.9	13.3	6.6	5.9
10/79	- 5.9	-10.0	- 5.5	- 5.2	- 6.0	- 6.7	- 8.6	-16.0	- 2.7	- 8.7	-10.3
11/79	4.1	3.8	3.2	2.9	- 0.1	2.6	6.3	17.1	- 6.8	3.1	-10.3
12/79	2.3	3.1	2.0	2.3	2.3	1.7	1.2	17.3	7.3	- 1.4	0.7

TABLE 2

STOCK BETAS FOR DIFFERENT MARKET INDICES

Stock	NYSE Comp.	Bar-ron's 50	S & P 500	S & P 400	Dow Ind.	Dow 65	Wil-shire 5000
ASA	0.64	0.69	0.64	0.62	0.45	0.65	0.85
NSM	2.57	2.06	2.69	2.67	2.40	2.48	2.27
GF	1.03	0.89	1.06	1.01	0.80	1.00	0.93
GM	0.83	0.76	0.93	0.87	0.91	0.91	0.70

TABLE 3

RANGES OF BETA VALUES

Stock	Betas High	Betas Low	Range
ASA	0.85 (Wilshire)	0.45 (DJIA)	0.40
NSM	2.69 (S & P 500)	2.06 (Barron's)	0.63
GF	1.06 (S & P 500)	0.80 (DJIA)	0.26
GM	0.93 (S & P 500)	0.70 (Wilshire)	0.23

FIGURE 1

RELATIONSHIP BETWEEN INDEX BREADTH & BETA MAGNITUDE

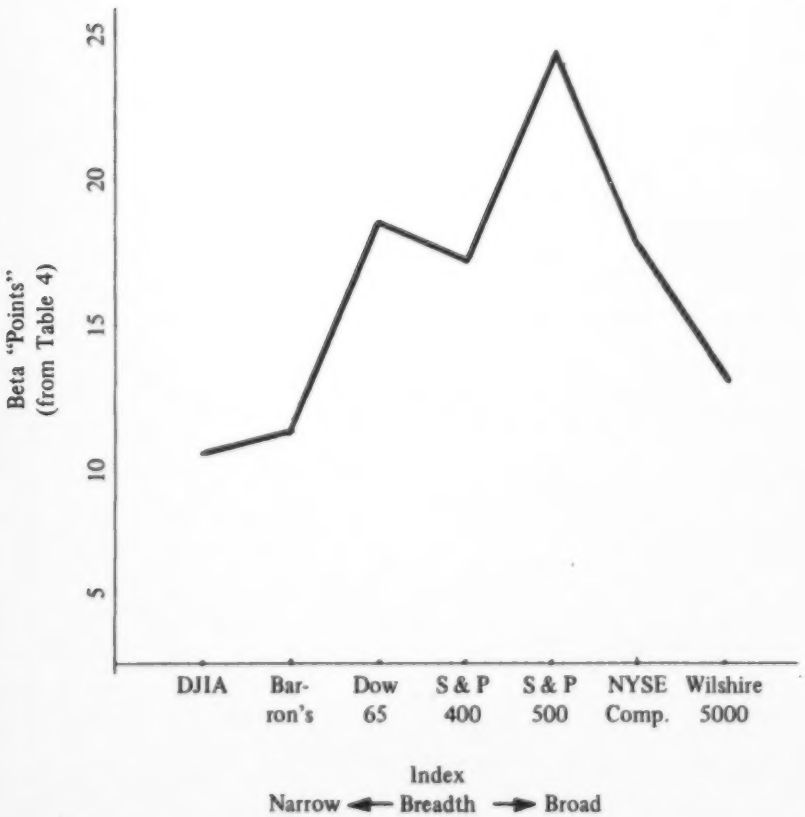


TABLE 4

"POINTS" EARNED BY AN INDEX ON THE BASIS OF 7 = HIGHEST BETA, 6 = NEXT HIGHEST AND SO ON

	Stocks				
Indices	ASA	NSM	GF	GM	Total Points
NYSE Comp.	3.5	5	6	3	17.5
Barron's 50	6	1	2	2	11
S & P 500	3.5	7	7	7	24.5
S & P 400	2	6	5	4	17
DJIA	1	3	1	5.5	10.5
Dow 65	5	4	4	5.5	18.5
Wilshire 5000	7	2	3	1	13

NOTE: Fractional points were given for ties in the rankings.

1. Monthly changes in the seven market averages for the 1975-79 period were remarkably similar given their sharply different makeup.

2. Market indices may produce significantly different beta values for the same stock.

3. Breadth of market index does not seem to predict linearly to beta values for the stocks examined in this study.

4. A stock's required rate of return would seem just as peculiar to a market average as it is to estimates of riskfree and market returns.

It is not within the scope of this paper to judge the appropriateness of any index nor to promote one index over another. It is enough to reaffirm that the selection of a market index as a proxy for the market has important consequences and to conclude that future research into the stability of beta would do well to consider the index aspect.

BIBLIOGRAPHY

Brealey, Richard, and Stewart Myers. *Principles of Corporate Finance.* New York: McGraw-Hill, 1981.

Chiras, D. P. "Stock betas in the long run," *The Collegiate Forum.* Spring 1980.

Draper, D. N., and H. Smith. *Applied Regression Analysis.* New York: Wiley, 1966.

Francis, J. C. *Investments.* New York: McGraw-Hill, 1980.

Lehmann, E. L. *Testing Statistical Hypotheses.* New York: Wiley, 1959.

Rao, C. R., S. K. Mitra, and A. Matthai. *Formulae and Tables for Statistical Work.* India: Statistical Publishing Society, 1947.

Sharpe, William F. *Investments.* Englewood Cliffs, N. J.: Prentice-Hall, 1981.

ARKANSAS MANAGEMENT AND THE ARBITRATION PROCESS: A COMMENT

Jack E. Adams
Professor of Economics
University of Arkansas, Little Rock

INTRODUCTION

The arbitration process is expanding into numerous professional areas of the American business environment, for example, real estate appraisal and public accountancy among others. The labor arbitrator has become an important resource to both the short and long range production efficiency of manufacturers. An important resolution of a major labor-management dispute was recently observed by millions of baseball fans. Even though John Dunlop, the former Secretary of Labor, was referring to professional baseball, the following statement appears to be apropos also of the labor arbitration process whereby:

> . . . facts do not tell their own story, they must be cross-examined. They must be carefully analyzed, systematized, compared and interpreted.[1]

The importance of labor arbitration as an impartial conveyor of grievance-issue resolution without a noticeable disruption of the production of goods and services will become even more significant to the State of Arkansas as it strives for continued economic growth and a resultant improvement in societal welfare via increased personal income. Thus, the following question is one of significant importance to the Arkansas business environment.

> How do managers of Arkansas manufacturing firms perceive the arbitration process?

RESEARCH METHODOLOGY

In an effort to determine various aspects of this managerial perception, a mail-questionnaire survey of some 300 Arkansas manufacturers with collective bargaining agreements was conducted during June 1981.[2] The response rate was about 46.3 percent and indicated that the managers of these particular firms were quite interested in the arbitration process.

FINDINGS AND CONCLUSIONS

An interpretation of the majority opinion of the 143 managerial survey respondents reveals the following summary "comments" about the Arkansas managerial perception of the labor arbitration process.

1. There is not a perceived labor arbitration crisis which might be based on such considerations as an arbitrator shortage.

2. The ideal arbitrator is between 41 and 65 years of age and either a full-time arbitrator or is an attorney-at-law.

3. While there is not a concise opinion about the preferred arbitrator referral lists (i.e., American Arbitration Association vis-a-vis

Federal Mediation and Conciliation Service), the modal response is "no opinion."

4. The managers do not perceive that arbitrator fees induce a more conciliatory stance with respect to less severe grievance issues.

5. These respondents do not have an opinion about whether the per diem fees associated with a particular arbitration association (i.e., American Arbitration Association or Federal Mediation and Conciliation Service) are more reasonable. The modal response, however, is "no opinion."

6. There is not a concise managerial opinion with respect to preferred arbitrator per diem fee ranges. Nevertheless, the modal per diem fee interval ranges from $200.00 to $249.00.

In the final analysis, the arbitration process should become increasingly important to smooth labor-management relations in a growth oriented Arkansas economy.

FOOTNOTES

[1]See John Dunlop, "The Development of Labor Organization: A Theoretical Framework," in Richard Rowan (ed.), *Readings in Labor Economics and Labor Relations* (Homewood, Illinois: Richard D. Irwin, 1968), p. 42.

[2]The title of the respondents is shown in the position description of the *Directory of Arkansas Manufacturers.* See Arkansas Industrial Development Foundation, *Directory of Arkansas Manufacturers* (Little Rock, Department of Economic Development, 1981), pp. 38-175. Also, the universe was determined from unpublished data in the files of the Arkansas Industrial Development Commission. This population data was available for corporations with at least 100 employees in larger Arkansas cities (i.e., Jonesboro, Pine Bluff, Texarkana, Little Rock, and Fort Smith) and for firms with 25 or more employees in the remaining cities throughout the state.

REVISED BEA PROJECTIONS OF ARKANSAS' POPULATION

Phillip H. Taylor
Director, Bureau of Business and Economic Research
University of Arkansas, Fayetteville

With the certification of the 1980 Census counts, many areas of the country have a "certified" count that is different from what demographers and economists expected. This is highlighted by the fact that the Bureau of Economic Analysis(BEA), U.S. Department of Commerce, based on historical data, "expected" the nation's 1980 population to be 221.6 million. However, the actual count, certified by the Bureau of the Census, is 226.5 million. Moreover, the BEA "expected" Arkansas to have a 1980 population of 2,188,000 but the Bureau of the Census figure actually certified is 2,285,000.

The cause, or causes, of the differences in "expected" and "certified" counts has not been determined. There are several possibilities that could explain all or part of the differences. But more significant than their cause is the impact these disparities have on data used to reflect economic conditions and to make projections for planning purposes. For example it is currently anticipated that per capita income statistics for various counties in Arkansas will be modified by as much as ± 10 to 15 percent for some of the years between 1970 and 1980 as a result of the addition of 97,000 inhabitants relative to what BEA had expected Arkansas' population to be in 1980.

In October 1980, the Bureau of Economic Analysis released its projections of population to the year 2030. Recently, it has released a first approximation, or "rough", projection for the years 1985, 1990, and 2000 based on the certified census counts. Table I contains both the original and revised projections. Examination of the table shows that, in making its first efforts to revise the projections, BEA has elevated them by a constant amount – 98,000 – to reflect the differences found in 1980. As of yet, no further revisions based on the certified demographic structure of the state have been made available. Similarly modifications of the intercensal estimates of Personal Income and Per Capita Income have not been released. However, when they do become available, this Bureau will analyze the changes and present the findings in a forthcoming issue of the *Review*.

TABLE 1

BEA POPULATION PROJECTIONS
ARKANSAS

Year	October 1980 Projections	New "rough" Estimates
1985	2,274	2,372
1990	2,361	2,459
2000	2,514	2,612

THE DEFICIT IN THE FEDERAL BUDGET: DOES IT REALLY MATTER?

Thomas R. McKinnon
Director, Bessie B. Moore Center
for Economic Education
University of Arkansas, Fayetteville

A much discussed issue in the last presidential election was the deficit in the federal budget. It was presented as a primary problem in a troubled American economy and there was even a move afoot to require a balanced budget by constitutional amendment. Although the deficit peaked at a record high of $66 billion in 1976, it has remained at high levels each year since. The eventual winner of the election projected that his policies, once in effect, would reduce the deficit so that the budget would be balanced by 1984. Recently the Office of Management and Budget forecast a $162 billion deficit in 1984.

Some of the same people who have been forecasting disaster unless the deficit is brought under control are now saying it is not really important. According to *The Wall Street Journal*, members of the President's Council of Economic Advisors stated that "red ink isn't as damaging as many in Congress and in financial circles think" and one member presented studies denying any direct relationship between deficits on the one hand and inflation, high interest rates, and growth in the money supply on the other.[1] Is a deficit then bad, good, or does it matter? It is easy to understand why many are confused.

Deficits are the norm regardless of which party is in power; surpluses have appeared only eight times in the past 40 years.[2] The Federal Government last had a surplus in its budget in 1969. However, the recent trend is for deficits to be larger, and current forecasts are for deficits exceeding $100 billion a year for the foreseeable future.

Views toward a balanced budget have changed over the years. The historical attitude was that the budget should be annually balanced with the federal government spending only what it takes in taxes. Experience showed that, even with the best of intentions, an annually balanced budget was almost impossible because fluctuations in the level of economic activity affected government revenue and expenditures in unexpected ways. Moreover, if expenditures are to be cut or increased to keep pace with tax collections, government spending, by its being cut during recession and increased during expansionary inflation, will magnify the business cycle fluctuations.

An innovative budgetary concept of the 1960's was the cyclically balanced budget. The balanced budget paradigm was maintained but the time period for balance was extended. The budget could be in deficit during a recession but should be in surplus during prosperity so that the budget is balanced over the cycle. The problem is that the downturns and upturns vary in length and intensity so that the budget is never balanced.

The most recent budgetary philosophy is that a balanced budget should not be of concern. Termed "functional finance," the concept was that the budget would be in deficit or surplus depending only on the stability needs of the economy. Even though a balanced

budget is never required, under the functional finance concept a surplus should appear in business cycle peaks. Recent administrations have had deficits throughout the cycle.

The argument most often heard for a balanced budget is that a deficit causes inflation. However, the historical record shows that we have had periods of deficit without inflation as well as others with inflation. It seems that whether a deficit is inflationary depends on how it is financed, its magnitude, and the rate of change.

An argument for a balanced budget that is of recent vintage is that a federal government deficit "crowds out" private investment and reduces the level of economic growth. It has been pointed out that private saving is not a given and might be enhanced by a deficit. There is little empirical evidence either for or against such assertions.

Perhaps the most pragmatic reason given for requiring a balanced budget is that it would force a curtailment of government spending. Because of political pressures, Congress has a propensity to expand government spending without taxing. A required balancing of the budget would discipline an extravagant government.

Opponents to a required balanced budget have based their arguments on Keynesian policies for economic stability. According to this theory, the ability to run a deficit of the proper size at the right time can bring about recovery from recession, employ the unemployed, and stimulate economic growth. Recent experience casts doubt on the effectiveness of such policies in an economy beset by inflation, rapid technological change, and a low growth rate in productivity.

The arguments both for and against a balanced federal budget are weak, and strong conclusions should not be drawn from such weak arguments. The effects of a balanced or unbalanced budget are complicated and ultimately depend on a host of other factors. Herbert Stein gave perspective to the arguments when he stated, "If the current furor over budget-balancing should settle down to a constructive search for a synthesis of what is valid in both viewpoints, it will have been most valuable."[3]

FOOTNOTES

[1]*The Wall Street Journal,* December 10, 1981.

[2]*Economic Report of the President,* January 1981, U.S. Government Printing Office, Washington, 1981.

[3]Robert C. Puth, Editor, *Current Issues in the American Economy,* 1980-81 edition, D. C. Heath and Company, 1980, p. 143.

SELECTED ARKANSAS AND U.S. ECONOMIC INDICATORS

Arkansas Economy: Q-III, 1981 24

Index of Total Employment, Arkansas and United States 25

Index of Personal Income, Arkansas and United States 26

Index of Value Added by Manufacture, Arkansas, and Index of Manufacturing Production, United States 27

Index of Cash Receipts from Farm Marketing, Arkansas and United States 28

Indexes of Activity of Arkansas Savings and Loan Associations 29

Index of Residential Construction Contracts, Arkansas and United States 30

Index of Nonresidential Construction Contracts, Arkansas and United States 31

Waterborne Commerce McClellan-Kerr Arkansas Navigation System 32

Consumer Prices 33

Labor Force Estimates—November 1981 34

The Mineral Industry of Arkansas in 1981 36

ARKANSAS ECONOMY: Q-III, 1981

Phillip H. Taylor
Director, Bureau of Business and Economic Research
University of Arkansas, Fayetteville

It now appears that when final estimates of Arkansan's personal income in 1981 are available, the annual growth will amount to approximately 10 percent. If so, income growth will have out paced inflation by a slight amount even though the economy was sluggish throughout the year.

During the third quarter, the economy improved slightly with seasonally adjusted employment exceeding 1980 levels. Manufacturing employment, while moving up throughout the first three quarters of 1981, continued to be below both 1978 and 1979 levels.

Even though employment in manufacturing has not returned to prior levels, value added by manufacture has continued to increase. By year-end, the annual growth should be in the 10 percent range and, unlike 1980, should be above that attained in 1978 and 1979.

Data for the first three quarters of the year indicated that cash receipts from farm marketings in 1981 are roughly the same as in 1980. Thus, at least through nine months, price changes and productions seem to have been offsetting variables but the lack of growth in total value means that the farm sector's cash receipts has not kept pace with inflation induced cost changes.

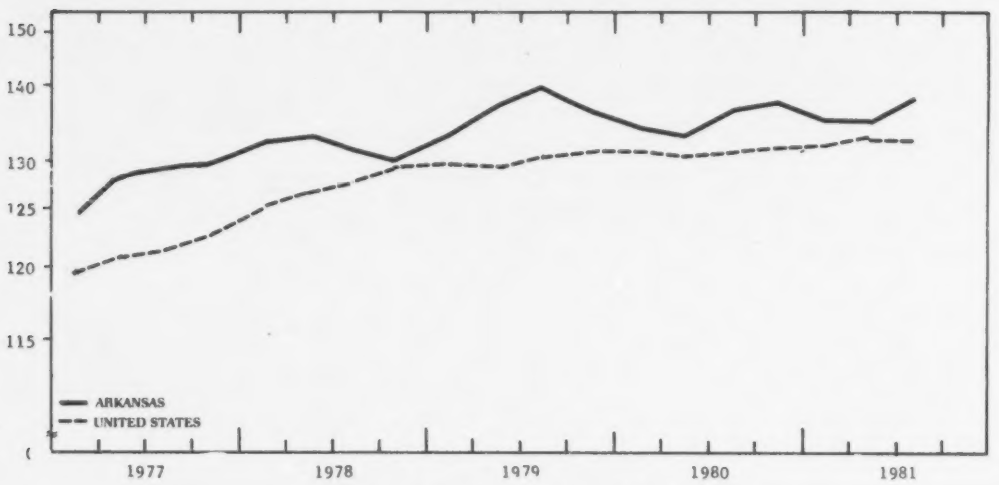
The home construction industry deteriorated for the third consecutive quarter period. The $138.4 million in in residential construction contracts for the third quarter of 1981 was the second lowest quarterly amount since 1976. Similarly, nonresidential contracts for the same quarter were at their lowest level since the first quarter of 1977.

Total new loans by savings and loan associations were only $77.6 million in Quarter III. The projected year-end figure indicates that new loans are at their lowest annual level since at least 1974 and have declined every year since 1977. However, it should also be noted that the rate of outflow of savings began to diminish in the third quarter although net new savings continued to be negative.

Overall, the performance of the Arkansas economy improved, at least temporarily, in the third quarter. Early figures, however, indicate that the fourth quarter may have witnessed a deterioration. Moreover, rising interest rates in early 1982 indicate that the national housing and automobile industries may not recover in the near term. At the same time, there are no reasons to project any strong improvement in the agricultural sector. Therefore, there will probably be further declines in Arkansas' economy through the first three quarters of 1982, but with the possibility of economic recovery beginning before the end of the year.

INDEX OF TOTAL EMPLOYMENT, ARKANSAS AND UNITED STATES

Quarterly data, seasonally adjusted, 1967= 100



(Semi-logarithmic scale: equal slopes indicate equal rates of change)

Base Year to Date and Quarterly Changes in Total Employment

Seasonally adjusted, percent

	1967 to 1981 Q-III	1980 Q-III to 1980 Q-IV	1980 Q-IV to 1981 Q-I	1981 Q-I to 1981 Q-II	1981 Q-II to 1981 Q-III
Arkansas	+ 39.4	+ 0.8	- 2.0	+ 0.3	+ 2.7
United States	+ 32.7	+ 0.2	+ 0.8	+ 0.9	- 0.1

EMPLOYMENT BY MAJOR INDUSTRY GROUP IN ARKANSAS, AND UNEMPLOYMENT RATE, ARKANSAS AND UNITED STATES

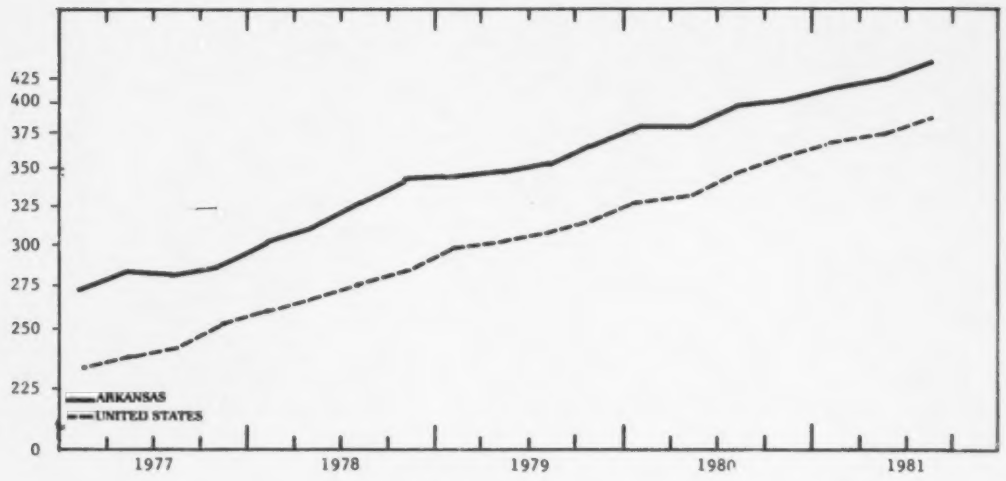
Seasonally adjusted

TIME PERIOD	EMPLOYMENT				UNEMPLOYMENT RATE	
	Wage and Salary		Agricultural	Total	Arkansas	United States
	Manufacturing	Nonmanufacturing				
1974	201,300	432,200	56,700	786,800	5.0	5.6
1975	175,500	444,500	61,000	776,700	8.9	8.5
1976	187,300	445,100	65,600	794,000	6.2	7.7
1977	208,900	483,400	62,800	837,700	6.0	7.0
1978	216,500	507,350	61,250	868,400	6.4	6.0
1979	217,750	526,700	65,800	904,000	6.3	5.8
1980	210,050	540,400	65,100	896,200	7.4*	7.2
1981						
Q-I	210,100	537,250	63,300	892,420	9.1*	7.3
Q-II	212,950	537,050	64,350	894,840	7.9*	7.4
Q-III	214,400	534,550	64,550	918,730	8.2*	7.2

*Actual Rate. Effective January 1977 the Arkansas Employment Security Division revised its adjustments to employment data based on methods developed by the U.S. Bureau of Labor Statistics. As a result, the Arkansas unemployment rate cannot be seasonally adjusted at this time.

INDEX OF PERSONAL INCOME,
ARKANSAS AND UNITED STATES

Quarterly data, seasonally adjusted, 1967 = 100



(Semi-logarithmic scale: equal slopes indicate equal rates of change)

Base Year to Date and Quarterly Changes in Personal Income

Seasonally adjusted, percent

	1967 to 1981 Q-III	1980 Q-III to 1980 Q-IV	1980 Q-IV to 1981 Q-I	1981 Q-I to 1981 Q-II	1981 Q-II to 1981 Q-III
Arkansas	+ 342.0	+ 2.5	+ 3.0	+ 2.3	+ 4.1
United States	+ 283.4	+ 3.4	+ 2.9	+ 2.1	+ 3.1

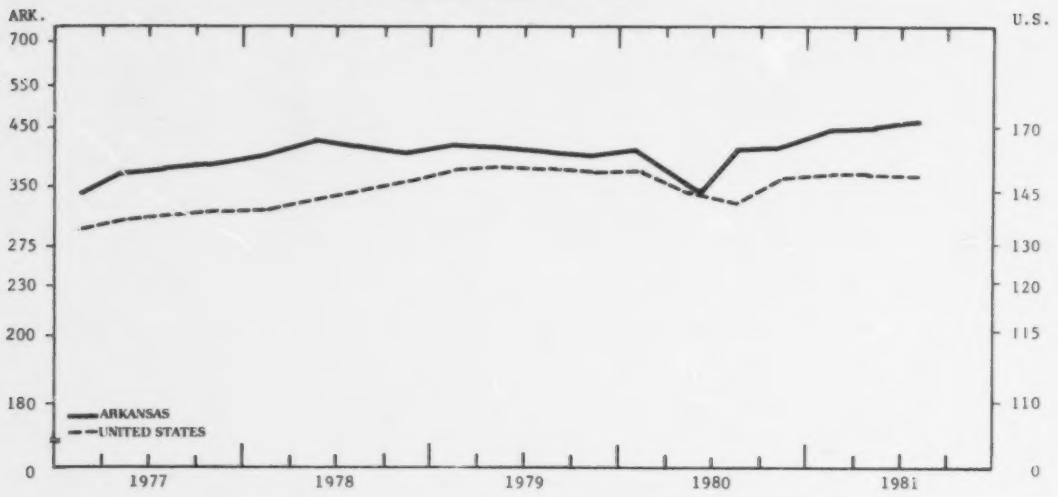
PERSONAL INCOME
IN ARKANSAS

Millions of dollars, seasonally adjusted

Quarter	1974	1975	1976	1977	1978	1979	1980	1981
Jan-Mar	2,142	2,070	2,508	2,837	3,118	3,698	4,002	4,394
Apr-Jun	2,242	2,373	2,667	2,948	3,208	3,681	3,975	4,495
Jul-Sep	2,213	2,391	2,626	2,984	3,315	3,805	4,160	4,681
Oct-Dec	2,234	2,368	2,676	3,070	3,406	3,929	4,265	
Annual	8,831	9,202	10,477	11,839	13,047	15,113	16,402	

INDEX OF VALUE ADDED BY MANUFACTURE, ARKANSAS, AND INDEX OF MANUFACTURING PRODUCTION, UNITED STATES

Quarterly data, seasonally adjusted, 1967= 100



(Semi-logarithmic scale: equal slopes indicate equal rates of change)

Base Year to Date and Quarterly Changes in Manufacturing

Seasonally adjusted, percent

	1967 to 1981 Q-III	1980 Q-III to 1980 Q-IV	1980 Q-IV to 1981 Q-I	1981 Q-I to 1981 Q-II	1981 Q-II to 1981 Q-III
Arkansas	+ 362.2	+ 4.3	+ 6.2	+ 0.1	+ 3.4
United States	+ 53.1	+ 5.3	+ 2.1	+ 0.6	+ 0.3

VALUE ADDED BY MANUFACTURE IN ARKANSAS

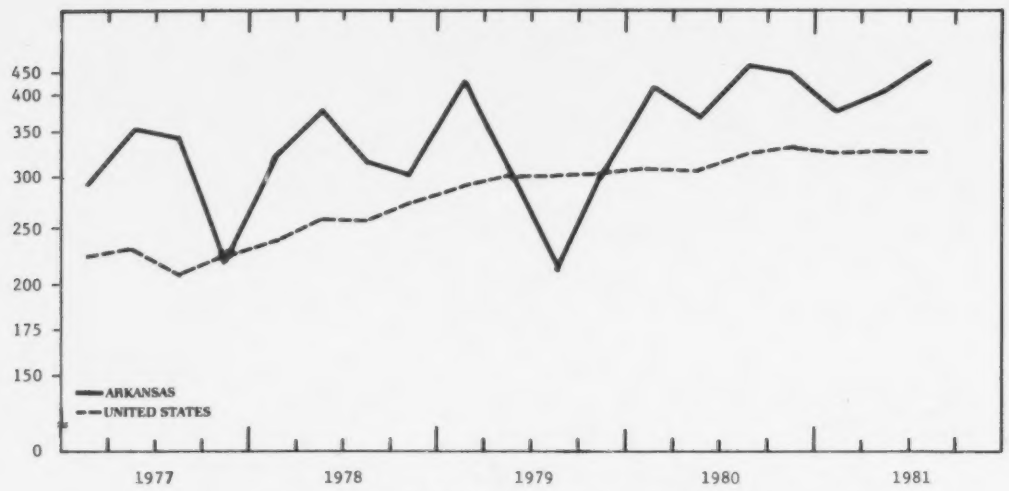
Millions of dollars

	Seasonally adjusted								Not seasonally adjusted
Quarter	1974	1975	1976	1977	1978	1979	1980	1981	1981
Jan-Mar	959.6	899.5	1,158.2	1,362.9	1,598.4	1,666.0	1,655.1	1,750.4	1,642.3
Apr-Jun	975.8	895.1	1,161.4	1,443.1	1,659.2	1,656.2	1,540.2	1,753.1	1,737.1
Jul-Sep	963.0	925.7	1,194.4	1,451.8	1,619.3	1,611.1	1,579.5	1,811.8	1,935.9
Oct-Dec	924.0	985.2	1,160.8	1,468.6	1,597.3	1,602.4	1,647.7		
Annual	3,822.4	3,705.5	4,674.8	5,726.4	6,474.2	6,535.7	6,422.5		

INDEX OF CASH RECEIPTS FROM FARM MARKETINGS

ARKANSAS AND UNITED STATES

Quarterly data, seasonally adjusted 1967 = 100



(Semi-logarithmic scale: equal slopes indicate equal rates of change)

Base Year to Date and Quarterly Changes in Cash Receipts

Seasonally adjusted, percent

	1967 to 1981 Q-III	1980 Q-III to 1980 Q-IV	1980 Q-IV to 1980 Q-I	1981 Q-I to 1981 Q-II	1981 Q-II to 1981 Q-III
Arkansas	+ 384.6	- 0.9	- 13.9	+ 3.9	+ 20.0
United States	+ 236.7	+ 2.1	- 2.7	+ 1.1[R]	- 0.3

CASH RECEIPTS FROM FARM MARKETINGS

IN ARKANSAS

Thousands of dollars

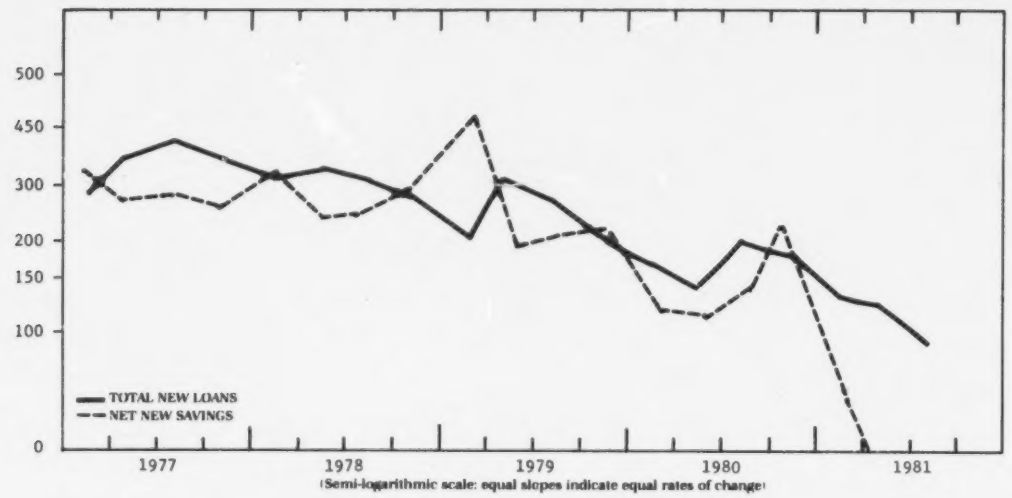
	Seasonally adjusted								Not seasonally adjusted
Quarter	1974	1975	1976	1977	1978	1979	1980	1981	1981
Jan-Mar	718,418	529,492	565,575	686,105	790,387	1,038,085	989,950	900,077	662,150
Apr-Jun	705,678	584,346	740,954	703,457	899,118	532,344	861,500	935,550	674,950
Jul-Sep	568,678	609,324	621,624	578,357	721,275	838,030	1,054,950	1,122,766	826,768
Oct-Dec	618,796	508,651	497,214	500,169	601,443	704,385	1,044,850		
Annual	2,611,570	2,231,813	2,425,367	2,468,088	3,012,223	3,231,844	3,951,250		

[R]Revised Based on Economic Indicators, October 1981.

INDEXES OF ACTIVITY OF ARKANSAS SAVINGS AND LOAN ASSOCIATIONS

TOTAL NEW LOANS AND NET NEW SAVINGS

Quarterly data, not seasonally adjusted 1967 = 100



(Semi-logarithmic scale: equal slopes indicate equal rates of change)

Base Year to Date and Quarterly Changes in Activity of Arkansas S & L Associations

Not seasonally adjusted, percent

	1967 to 1981 Q-III	1980 Q-III to 1980 Q-IV	1980 Q-IV to 1981 Q-I	1981 Q-I to 1981 Q-II	1981 Q-II to 1981 Q-III
Total New Loans	- 5.3	- 12.9	- 24.2	- 5.6	- 24.3
Net New Savings	- 137.9	+ 68.0	- 81.3	- 191.6	+ 6.6

ECONOMIC ACTIVITY OF ARKANSAS SAVINGS AND LOAN ASSOCIATIONS

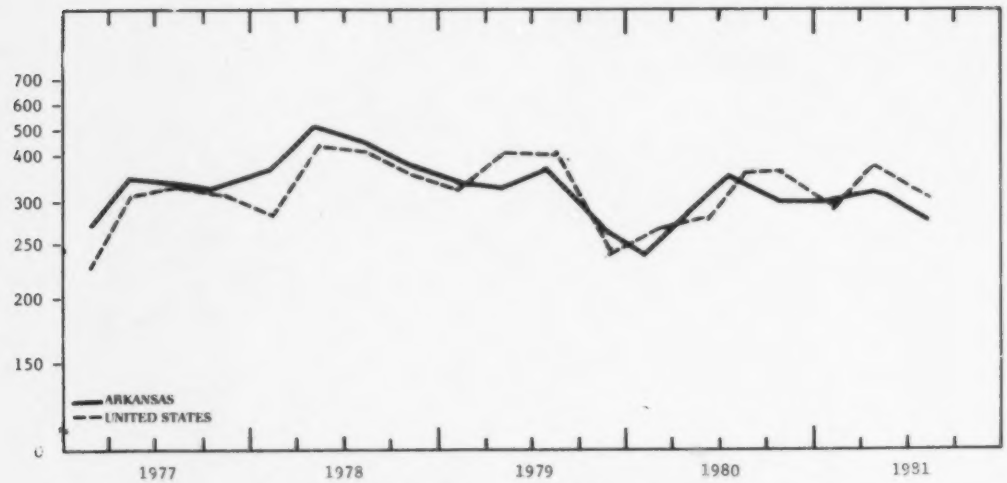
Thousands of dollars

TIME PERIOD	TOTAL NEW LOANS		NET NEW SAVINGS	
	Current $	1967 $	Current $	1967 $
1974	300,152	203,915	188,400	123,872
1975	413,366	255,678	309,304	192,119
1976	606,400	355,280	393,300	231,050
1977	815,800	448,590	405,000	223,492
1978	729,300	373,700	416,900	213,610
1979	625,900	290,560	436,830	204,525
1980	504,700	204,275	287,600	115,580
1981				
Q-I	103,100	39,220	22,300	8,480
Q-II	99,600	37,030	- 20,900	- 7,770
Q-III	77,600	28,040	- 20,100	- 7,260

INDEX OF RESIDENTIAL CONSTRUCTION CONTRACTS

ARKANSAS AND UNITED STATES

Quarterly data, not seasonally adjusted 1967= 100



(Semi-logarithmic scale: equal slopes indicate equal rates of change)

Base Year to Date and Quarterly Changes in Residential Construction

Not seasonally adjusted, percent

	1967 to 1981 Q-III	1980 Q-III to 1980 Q-IV	1980 Q-IV to 1981 Q-I	1981 Q-I to 1981 Q-II	1981 Q-II to 1981 Q-III
Arkansas	+ 179.9	- 13.3	- 1.5	+ 9.7	- 15.1
United States	+ 216.6	+ 0.7	- 21.2	+ 28.0	- 15.1

RESIDENTIAL CONSTRUCTION CONTRACTS

IN ARKANSAS

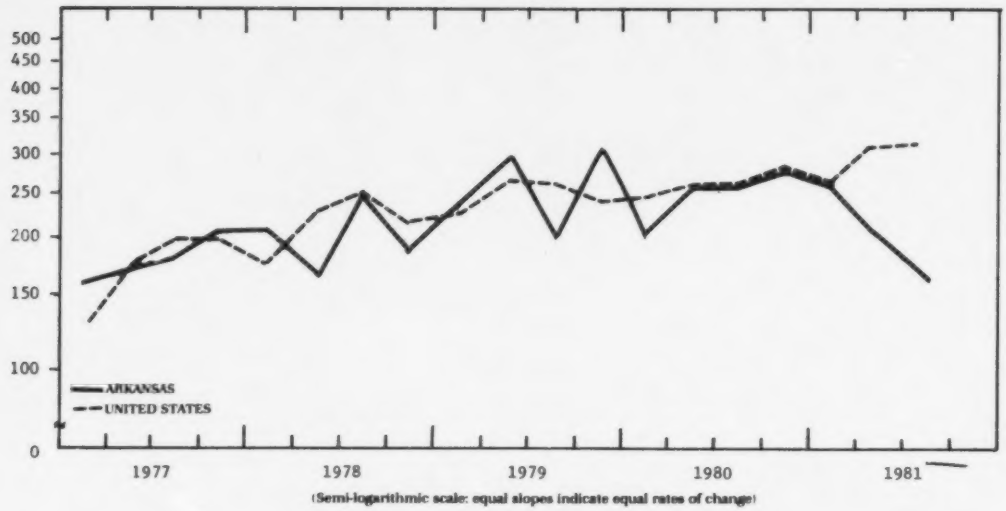
Thousands of dollars

	Seasonally adjusted								Not seasonally adjusted
Quarter	1974	1975	1976	1977	1978	1979	1980	1981	1981
Jan-Mar	93,249	84,488	116,379	160,861	220,739	205,119	144,050	176,180	161,900
Apr-Jun	94,963	85,740	117,164	173,558	236,915	153,917	137,600	159,750	177,600
Jul-Sep	84,214	98,557	122,732	182,210	227,633	193,364	177,450	138,360	150,800
Oct-Dec	82,505	104,656	134,927	217,222	236,718	154,130	185,450		
Annual	354,931	373,441	491,202	733,851	922,005	706,530	664,550		

INDEX OF NONRESIDENTIAL CONSTRUCTION CONTRACTS

ARKANSAS AND UNITED STATES

Quarterly data, not seasonally adjusted 1967 = 100



(Semi-logarithmic scale: equal slopes indicate equal rates of change)

Base Year to Date and Quarterly Changes in Nonresidential Construction Contracts

Not seasonally adjusted, percent

	1967 to 1981 Q-III	1980 Q-III to 1980 Q-IV	1980 Q-IV to 1981 Q-I	1981 Q-I to 1981 Q-II	1981 Q-II to 1981 Q-III
Arkansas	+ 64.9	+ 8.5	- 9.2	- 19.7	- 18.3
United States	+ 212.8	+ 8.8	- 8.1	+ 17.2	+ 0.5

NONRESIDENTAL CONSTRUCTION CONTRACTS

IN ARKANSAS

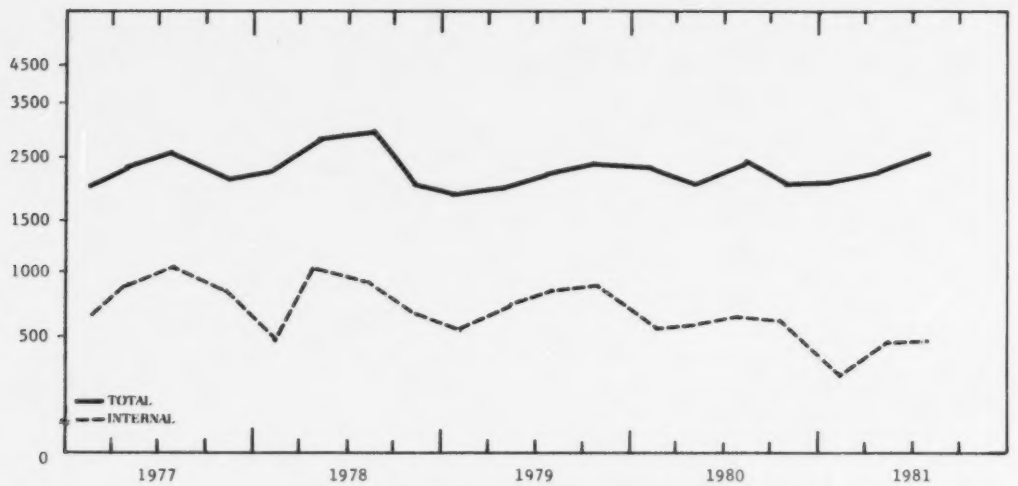
Thousands of dollars, not seasonally adjusted

Quarter	1974	1975	1976	1977	1978	1979	1980	1981
Jan-Mar	56,094	79,225	43,591	57,486	72,851	88,988	72,300	90,500
Apr-Jun	63,607	67,424	93,906	63,726	60,479	109,976	91,200	72,700
Jul-Sep	106,530	45,566	67,913	67,632	90,471	70,296	91,900	59,400
Oct-Dec	56,247	89,446	79,004	76,866	69,041	112,549	99,700	
Annual	272,478	281,661	284,414	265,710	292,842	381,809	355,100	

WATERBORNE COMMERCE

McCLELLAN-KERR ARKANSAS RIVER NAVIGATION SYSTEM

Quarterly data in thousands of short tons, not seasonally adjusted



(Semi-logarithmic scale: equal slopes indicate equal rates of change)

Base Year to Date and Quarterly Changes in Total and Internal Tonnages

Not seasonally adjusted, percent.
Base = Ave. Qtr. 1971

	1971 to 1981 Q-III	1980 Q-III to 1980 Q-IV	1980 Q-IV to 1981 Q-I	1981 Q-I to 1981 Q-II	1981 Q-II to 1981 Q-III
Total	+ 184.9	- 11.9	+ 1.1	+ 10.6	+ 10.2
Internal	- 18.5	- 7.6	- 36.6	+ 16.9	+ 7.4

FREIGHT TRAFFIC

ARKANSAS RIVER COMMERCE

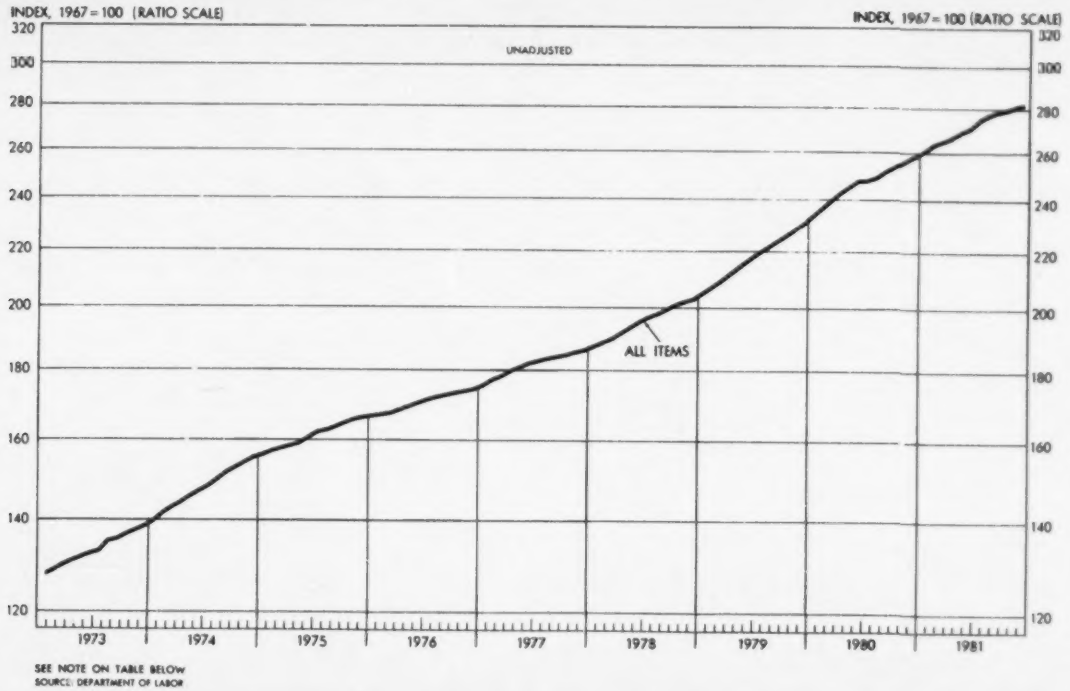
Thousands of short tons, not seasonally adjusted.

TIME PERIOD	TRAFFIC TONNAGES*			
	INBOUND	OUTBOUND	INTERNAL	TOTAL
1974	1,950	775	2,959	6,060
1975	1,440	870	2,465	5,204
1976	1,988	1,663	3,033	7,078
1977	2,841	2,339	3,463	9,138
1978	2,595	3,899	3,170	10,216
1979	2,026	3,456	2,932	8,926
1980	1,611	4,643	2,408	9,133
1981				
Q-I	343	1,220	394	2,131
Q-II	372	1,399	461	2,357
Q-III	440	1,594	495	2,597

*Total tonnage includes "through traffic"--shipments which originate and terminate outside the Arkansas River Commerce Area.

CONSUMER PRICES

In December, the consumer price index for all urban consumers rose 0.4 percent, seasonally adjusted (0.3 percent unadjusted). Food and beverage prices were up 0.5 percent, seasonally adjusted, and energy prices were up 0.1 percent, unadjusted.



[1967=100; monthly data seasonally adjusted, except as noted]

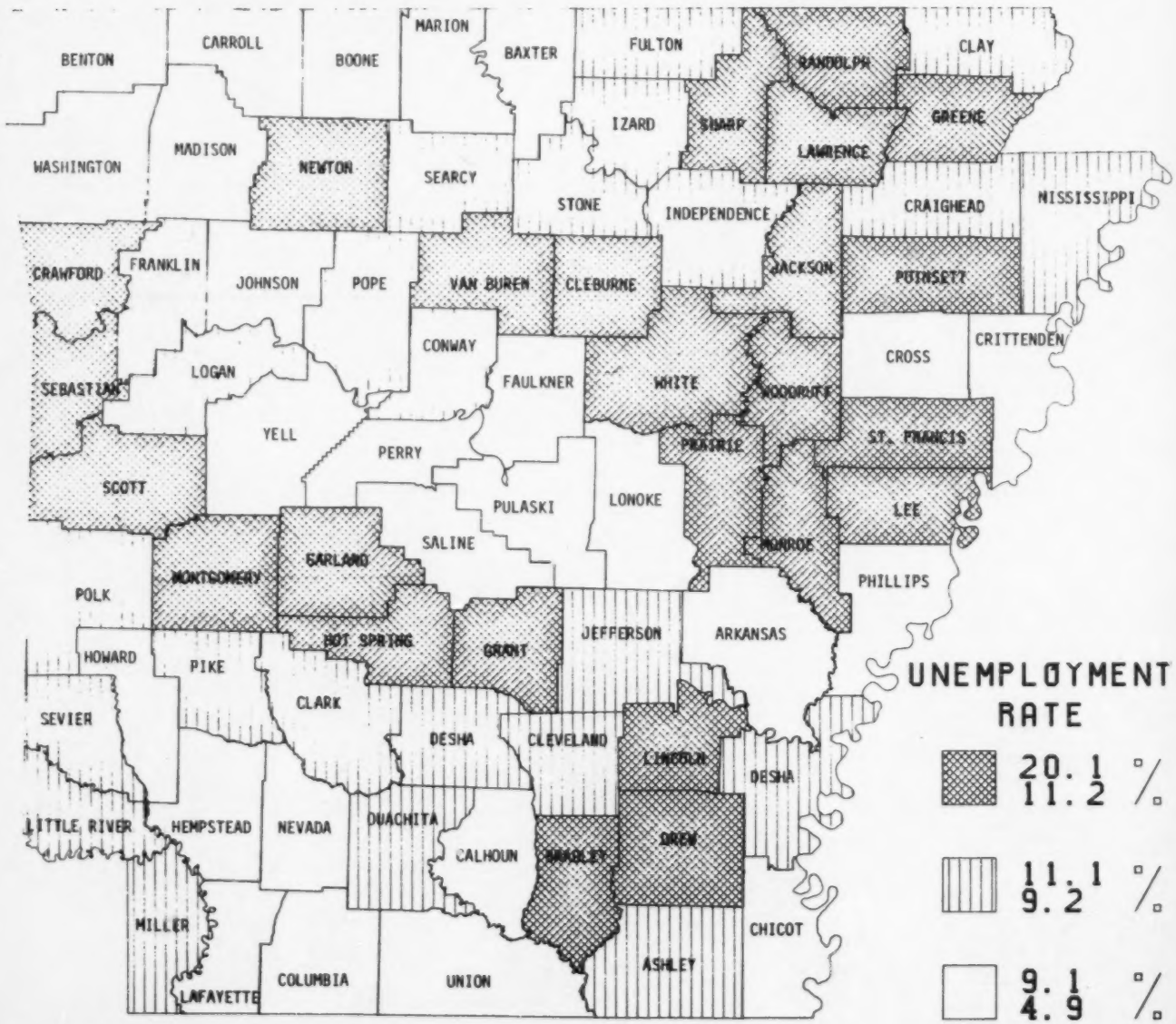
Period	All items [1] NSA	Food and beverages	Housing: Total [1]	Housing: Home purchase NSA	Housing: Financing, taxes, and insurance NSA	Apparel and upkeep	Transportation: Total [1]	Transportation: New cars	Transportation: Motor fuel [2]	Medical care	Energy [3] NSA	Services	All items less food, energy, and home purchase and finance [4]
Rel. imp. [5]	*100.0*	*18.3*	*45.5*	*10.3*	*12.0*	*4.9*	*19.0*	*3.6*	*5.9*	*4.7*	*10.8*	*41.6*	*49.6*
1974	147.7	158.7	148.8	142.7	181.1	136.2	137.7	117.5	159.9	150.5	159.7	152.1	138.5
1975	161.2	172.1	164.5	160.3	201.9	142.3	150.6	127.6	170.8	168.6	176.6	166.6	150.5
1976	170.5	177.4	174.6	168.4	212.8	147.6	165.5	135.7	177.9	184.7	189.3	180.4	160.8
1977	181.5	188.0	186.5	179.5	227.2	154.2	177.2	142.9	188.2	202.4	207.3	194.3	170.6
1978	195.4	206.3	202.8	196.7	257.8	159.6	185.5	153.8	196.3	219.4	220.4	210.9	180.9
1979	217.4	228.5	227.6	223.1	308.9	166.6	212.0	166.0	265.6	239.7	275.9	234.2	194.1
1980	246.8	248.0	263.3	254.3	396.0	178.4	249.7	179.3	369.1	265.9	361.1	270.3	211.6
1981	272.4	267.3	293.5	267.7	472.5	186.9	280.0	190.2	410.9	294.5	410.0	305.7	231.6
1980: Dec.	258.4	262.6	277.4	267.2	429.4	182.8	262.4	183.3	377.3	276.2	370.4	285.5	220.8
1981: Jan.	260.5	262.6	279.5	266.2	435.2	182.5	267.0	183.5	391.5	279.2	381.7	288.0	221.9
Feb.	263.2	263.4	281.3	263.0	437.1	184.0	273.4	183.3	417.5	281.7	401.1	290.3	223.7
Mar.	265.1	264.5	282.8	261.1	441.1	185.8	275.9	182.5	427.1	284.1	409.3	292.6	225.1
Apr.	266.8	264.5	284.8	260.7	447.1	186.1	275.7	185.7	421.0	286.6	409.8	295.4	226.9
May	269.0	263.9	288.4	263.0	458.3	185.7	276.5	190.1	414.8	289.1	411.3	299.6	228.3
June	271.3	264.5	291.7	266.6	467.2	185.8	277.2	192.2	408.7	292.1	414.0	303.1	229.9
July	274.4	266.7	296.5	271.4	480.0	186.8	279.4	193.3	404.8	295.9	415.7	308.5	232.6
Aug.	276.5	268.7	299.4	272.6	488.3	188.3	281.1	193.4	403.6	299.6	416.1	312.1	234.3
Sept.	279.3	271.3	303.3	274.5	501.8	189.4	284.4	194.6	[3] 405.8	302.2	417.1	316.9	236.7
Oct.	279.9	271.9	303.3	272.5	501.8	189.7	287.8	194.1	410.7	305.1	414.9	318.3	238.4
Nov.	280.7	272.5	304.6	270.2	505.6	189.3	290.2	194.5	412.8	308.3	414.1	321.0	239.7
Dec.	281.5	273.8	305.7	270.5	506.3	189.5	291.5	195.8	412.9	310.7	414.6	322.5	241.4

[1] Includes items not shown separately.
[2] Includes direct pricing of diesel and gasohol beginning September 1981.
[3] Fuel oil, coal, and bottled gas; gas (piped) and electricity; and motor fuel, motor oil, coolant, etc.
[4] Estimated series. Finance includes financing, taxes, and insurance.
[5] Relative importance, December 1980.

NOTE.—NSA indicates data are not seasonally adjusted.
Data beginning 1978 are for all urban consumers; earlier data are for urban wage earners and clerical workers.
Source: Department of Labor, Bureau of Labor Statistics.

LABOR FORCE ESTIMATES
NOVEMBER 1981

IN NOVEMBER 1981, THE CIVILIAN LABOR FORCE FELL 19,700 TO A TOTAL OF 1,018,000. TOTAL EMPLOYMENT FELL 29,700 TO A TOTAL OF 921,400. UNEMPLOYMENT IN THE STATE GREW BY 10,000 TO A TOTAL OF 96,600. AMONG THE 75 COUNTIES, MARION EXPERIENCED THE LOWEST UNEMPLOYMENT RATE AT 4.9 PERCENT AND HOT SPRING THE HIGHEST AT 20.1. MOREOVER, THE UNEMPLOYMENT RATES IN 43 COUNTIES EQUALLED OR EXCEEDED THE STATE RATE. IN THE SMSAs, FAYETTEVILLE-SPRINGDALE SMSA HAD THE LOWEST UNEMPLOYMENT RATE AT 5.6 PERCENT, WHILE FORT SMITH SMSA HAD THE HIGHEST AT 11.1 PERCENT. THE RATES FOR THE LITTLE ROCK-NORTH LITTLE ROCK AND THE PINE BLUFF SMSAs WERE 8.1 AND 9.8 PERCENT, RESPECTIVELY.



UNIVERSITY OF ARKANSAS
COMPUTER GENERATED MAP

LABOR FORCE ESTIMATES
November 1981

State and SMSA's	Civilian Labor Force	Unemployment Rate	Total Employment
UNITED STATES	106,864,000	7.9	98,393,000
STATE OF ARKANSAS	1,018,000	9.5	921,400
Fayetteville-Springdale SMSA (Benton & Washington Counties)	80,650	5.6	76,150
Fort Smith SMSA (Crawford & Sebastian Counties in Arkansas and LeFlore & Sequoyah Counties in Oklahoma)	86,100	11.1	76,550
Little Rock-North Little Rock SMSA (Pulaski & Saline Counties)	194,700	8.1	179,000
Pine Bluff SMSA (Jefferson County)	40,800	9.8	36,800

County	Civilian Labor Force	Unemployment Rate	Total Employment	County	Civilian Labor Force	Unemployment Rate	Total Employment
Arkansas	11,900	8.6	10,875	Lee	5,250	13.8	4,525
Ashley	10,800	10.6	9,650	Lincoln	3,900	11.5	3,450
Baxter	9,300	8.3	8,525	Little River	5,025	10.0	4,525
Benton	33,475	5.9	31,500	Logan	7,400	10.8	6,600
Boone	12,075	6.2	11,325	Lonoke	16,625	7.5	15,375
Bradley	5,250	14.3	4,500	Madison	5,950	7.1	5,525
Calhoun	2,275	7.7	2,100	Marion	6,625	4.9	6,300
Carroll	7,325	8.2	6,725	Miller	14,000	11.1	12,450
Chicot	6,950	9.0	6,325	Mississippi	26,200	10.3	23,500
Clark	10,800	9.3	9,800	Monroe	5,750	11.7	5,075
Clay	8,800	9.7	7,950	Montgomery	2,875	14.8	2,450
Cleburne	6,475	11.6	5,725	Nevada	4,400	9.1	4,000
Cleveland	2,150	10.5	1,925	Newton	2,050	14.6	1,750
Columbia	13,100	7.1	12,175	Ouachita	12,225	10.8	10,900
Conway	8,300	9.6	7,500	Perry	3,250	8.5	2,975
Craighead	31,100	9.8	28,050	Phillips	13,575	9.0	12,350
Crawford	16,025	13.7	13,825	Pike	4,475	10.6	4,000
Crittenden	24,500	8.5	22,425	Poinsett	11,200	12.1	9,850
Cross	9,125	9.0	8,300	Polk	6,025	10.4	5,400
Dallas	3,750	9.3	3,400	Pope	18,150	9.4	16,450
Desha	8,025	9.7	7,250	Prairie	3,625	11.7	3,200
Drew	9,050	11.3	8,025	Pulaski	170,275	8.0	156,650
Faulkner	21,675	9.1	19,700	Randolph	7,425	11.4	6,575
Franklin	6,550	9.2	5,950	St. Francis	13,425	15.5	11,350
Fulton	2,900	9.5	2,625	Saline	24,425	8.5	22,350
Garland	28,725	12.2	25,225	Scott	3,150	12.7	2,750
Grant	4,275	12.3	3,750	Searcy	3,050	9.8	2,750
Greene	14,575	11.5	12,900	Sebastian	42,850	12.4	37,525
Hempstead	11,350	8.4	10,400	Sevier	5,625	11.1	5,000
Hot Spring	11,800	20.1	9,425	Sharp	4,250	11.8	3,750
Howard	7,350	6.5	6,875	Stone	3,575	10.5	3,200
Independence	16,300	9.2	14,800	Union	23,650	5.6	22,325
Izard	4,325	9.2	3,925	Van Buren	4,200	13.7	3,625
Jackson	9,475	14.8	8,075	Washington	47,175	5.4	44,650
Jefferson	40,800	9.3	36,800	White	23,000	11.2	20,425
Johnson	7,775	7.1	7,225	Woodruff	4,500	11.7	3,975
Lafayette	3,850	8.4	3,525	Yell	8,100	8.3	7,425
Lawrence	8,475	13.3	7,350				

Source: The Research and Statistics Section, Arkansas Employment Security Division.

THE MINERAL INDUSTRY OF ARKANSAS IN 1981

Arkansas' nonfuel mineral production in 1981, consisting of 2 metallic and 12 nonmetallic minerals, was valued at $302.7 million, a 5.6% increase over the previous year, according to estimates by the Bureau of Mines, U.S. Department of the Interior.

The State continued its role as a major producer of several nonfuel minerals, ranking at or near the top in the production of barite, bauxite, bromine, and vanadium, and was one of the main suppliers of whetstones and abrasives. Seven of the minerals produced during 1981 recorded decreases in production, reflecting the general national downturn in demand for metallic and industrial minerals by the manufacturing and construction industries. But, significant (greater than 10%) increases in output were shown by barite, bromine, and vanadium producers.

The nonmetallic sector contributed approximately 9 out of every 10 dollars of the State's total nonfuel mineral value. Leading the nonmetallic commodities in value was bromine, followed by crushed stone and portland cement. In the metallic sector, bauxite led in value, followed by vanadium.

Milchem continued the construction of a barite processing plant, mine, and other facilities near Hopper in southwestern Montgomery County. The company hopes to begin mining in August 1982. The barite ore is not high grade and the life of the plant is estimated at 10 years; however, the facility will provide a substantial amount of the barite used in the world's supply of oil-well-drilling mud.

Reynolds Metals announced tentative plans to shut down its Malvern Cable Plant about December 23, 1981; operations may resume in February 1982. Earlier in the year, Reynolds temporarily phased out its mining operations at Bauxite and shut down several potlines at Jones Mill; the closings left Reynolds operating at about 67% of its North American primary aluminum capacity.

Union Carbide resumed production of vanadium oxides at Wilson Springs and is developing sites in Garland County, a mile northwest of their main offices, and in Hot Spring County north of Magnet Cove. Highland Gypsum began mining operations in Pike County after a 2-year closure; the area was formerly operated by Dulin Bauxite. A novaculite deposit northwest of Lonsdale is under development. Acme Brick is operating a new automated brick plant at Malvern.

"Bouguer Gravity Map of Arkansas," by J. D. Hendricks, G. R. Keller, and T. G. Hildenbrand, USGS Map GP-944, scale 1:500,000, 1981; and "Aeromagnetic Map of Central and Northeastern Arkansas," by T. G. Hildenbrand, J.D. Hendricks, and R. P. Kucks, 1 oversize sheet 1:500,000, USGS OF-81-0758 were issued.

Source: U.S. Department of the Interior, Bureau of Mines, Washington, D.C., Annual Preliminary Summary, January 21, 1982.

TABLE 1

NONFUEL MINERAL PRODUCTION IN ARKANSAS 1/

		1980		1981 p/	
		Quantity	Value (thousands)	Quantity	Value (thousands)
Abrasives	short tons	280	$ 1,686	189	$ 2,088
Bauxite	thousand metric tons	1,299	19,252	1,223	18,951
Clays	thousand short tons	1,150	14,402	1,247	11,210
Gem Stones		NA	140	NA	160
Lime	thousand short tons	175	7,785	171	7,911
Sand and gravel	do	13,017	31,651	13,100	31,000
Stone:					
Crushed	do	20,666	61,399	19,852	59,738
Dimension	do	8	355	8	380
Combined value of barite, bromine, cement (masonry and portland), gypsum, talc (soapstone), tripoli, and vanadium		XX	149,961	XX	171,287
Total		XX	286,631	XX	302,725

p/ Preliminary. NA Not available. XX Not applicable.

1/ Production as measured by mine shipments, sales, or marketable production (including consumption by producers).

CUMULATIVE INDEX

		PAGE
Vol. 13, No. 1 Spring 1980	"Forecasting Arkansas General Revenues," John C. Pickett, Arkansas Public Service Commission	1
	"The Economic Impact of a Razorback Football Game on Northwest Arkansas' Business Community," J. Frank Broyles, University of Arkansas; Robert D. Hay, University of Arkansas, Fayetteville	5
	"The Review: A New Level of Assurance for Users of Financial Statements of Non-Public Companies," G. William Glezen, University of Arkansas, Fayetteville	9
	"An Evaluation of Outdoor Recreationist's Attitudes Toward Economic Development in Recreation Areas," John S. Kaminarides, Arkansas State University; Jerry L. Crawford, Arkansas State University	12
	"Controlling Maintenance Inventory," Thomas E. Phillips, Florida Technological University	20
	"Gold Mania: A Perspective," Thomas R. McKinnon, University of Arkansas, Fayetteville	25
	"Retail Trade of Arkansas, By County, 1972-1977," Thakol Nunthirapakorn, University of Arkansas, Fayetteville	27
	Selected Arkansas and U.S. Economic Indicators	31
Vol. 13, No. 2 Summer 1980	"Experience of U.S. Exhibitors in Select Eastern European Trade Fairs," John K. Ryans, Jr., Kent State University; Daniel C. Kim, Kent State University; Marilyn L. Liebrenz, George Washington University	1
	"The Impact on Energy Constraints on Arkansas Tourism," Charles R. Britton, University of Arkansas, Fayetteville	9
	"Trend and Chi-Square Analyses of Plant Location Factors Influencing Foreign Manufacturing Investors in the United States," Hsin-Min Tong, Clarkson College; Beheruz N. Sethna, Clarkson College	15
	"The Effects of Pension Reform on Private Retirement Plans in Arkansas," Joseph W. Wilson, University of Arknasas, Fayetteville	23
	"Sources of Growth in Arkansas Personal Income," Phillip H. Taylor, University of Arkansas, Fayetteville	26
	"The Unemployment Rate: What Does it Really Mean?" Thomas R. McKinnon, University of Arkansas, Fayetteville	29
	"Impact of the Motor Carrier Act of 1980 on Arkansas: A Preliminary Analysis," Grant M. Davis, University of Arkansas, Fayetteville	31
	"Property Tax Alternatives in Arkansas," J. Martin Redfern, University of Arkansas, Fayetteville; Carl Farler, University of Arkansas; Joseph A. Ziegler, University of Arkansas, Fayetteville	37
	"Consensus Outlook for Key Economic Trends in the Arkansas Economy During 1980-81," Phillip H. Taylor, University of Arkansas, Fayetteville	46
	Selected Arkansas and U.S. Economic Indicators	51
Vol. 13, No. 3 Fall 1980	"National vs. Local Accounting Firms,: What are Their Differences of Perception Concerning Advertising?" Debra D. Oliver, Louisiana Tech University; Clyde L. Posey, Louisiana Tech University	1
	"Dealing With Uncertainty in Financial Reporting: How Could the Probabilistic Approach Be Made More Objective?" Thakol Nunthirapakorn, University of Arkansas, Fayetteville	6

	"Declining Rate of Productivity: An American Crisis," Thomas R. McKinnon, University of Arkansas, Fayetteville	13
	Selected Arkansas and U.S. Economic Indicators	15
Vol. 13, No. 4 Winter 1980	"The Perceived Quality of Life in the Ozarks," Charles R. Britton, University of Arkansas, Fayetteville; Joseph A. Ziegler, University of Arkansas, Fayetteville	1
	"Economic Demand of Residential Water in Arkansas: A Research Report," Richard K. Ford, Eastern Kentucky University; Joseph A. Ziegler, University of Arkansas, Fayetteville	10
	"The Question of Public Confidence: Arkansas and the Nation," Robert L. Savage, University of Arkansas, Fayetteville; Charles R. Britton, University of Arkansas, Fayetteville	20
	"Economic Growth and the 1980s: A Perspective," Thomas R. McKinnon, University of Arkansas, Fayetteville	24
	Selected Arkansas and U.S. Economic Indicators	26
	Cumulative Index	41
Vol. 14, No. 1 Spring 1981	"Developing an Effective Pre-Retirement Program," Thomas W. Zimmerer, Clemson University; Benjamin M. Hawkins, Clemson University	1
	"The Treasury-Federal Reserve Accord: Independence vs. the Level of Interest Rates. A Brief History and Critique of the Friedman-Schwartz Interpretation," William M. Kempey, Kean College of New Jersey	7
	"International Business Opportunities for Arkansas in the Biggest Market in Africa–Nigeria," C. P. Rao, University of Lagos, Nigeria; E. Olu Ogunjimi, University of Lagos, Nigeria	15
	"The Return Requirements of Rural Electric Cooperatives," James P. Herden, Arkansas Power & Light Company; Jack T. Blakley, Arkansas Power & Light Company	23
	"Supply Side Economics and Practical Policy: Some Comments," Thomas R. McKinnon, University of Arkansas, Fayetteville	33
	Selected Arkansas and U.S. Economic Indicators	35
Vol. 14, No. 2 Summer 1981	"The Staggers Rail Act of 1980–A Succinct Analysis," Grant M. Davis, University of Arkansas, Fayetteville	1
	"Personal Income and Transfer Payments in Arkansas," John Thanopoulos, University of Arkansas, Fayetteville	7
	"Advantageous Plant Location Factors in Arkansas," Gary M. Epping, Columbia College	20
	"Capital Formation and the Troubled American Economy," Thomas R. McKinnon, University of Arkansas, Fayetteville	29
	Selected Arkansas and U.S. Economic Indicators	31
Vol. 14, No. 3 Fall 1981	"Existing and Proposed User Fees on Arkansas' Rivers–A Preliminary Analysis," Grant M. Davis, University of Arkansas, Fayetteville	1
	"Factors Affecting Women's Increased Enrollment in Colleges of Business Administration," Elizabeth M. Crocker, University of Arkansas, Fayetteville; Ann R. Henry, University of Arkansas, Fayetteville	6
	"Social Indicators in Arkansas, 1981: A Cautious Reversal," William R. Darden, University of Arkansas, Fayetteville; Donna K. Darden, University of Arkansas, Fayetteville; E. W. Boatwright, University of Arkansas, Fayetteville	11

	"Are Arkansas Consumers Being Denied Credit Because of the Usury Ceiling?," Joseph W. Wilson, University of Arkansas, Fayetteville; E. Cameron Williams, University of Arkansas, Fayetteville	18
	"Expectations: A Troublesome Dimension of Policymaking," Thomas R. McKinnon, University of Arkansas, Fayetteville	21
	Selected Arkansas and U.S. Economic Indicators	23
Vol. 14, No. 4 Winter 1981	"Arkansas Personal Income, 1979," Timothy P. Cronan, University of Arkansas, Fayetteville; Robert W. Strand, University of Arkansas, Fayetteville	i
	"Market Indices and Beta Variability," Ladd Michael Kochman, University of North Carolina, Wilmington; Ravija Badarinathi, University of North Carolina, Wilmington	12
	"Arkansas Management and the Arbitration Process: A Comment," Jack E. Adams, University of Arkansas, Little Rock	18
	"Revised BEA Projections of Arkansas' Population," Phillip H. Taylor, University of Arkansas, Fayetteville	20
	"The Deficit in the Federal Budget: Does it Really Matter?," Thomas R. McKinnon, University of Arkansas, Fayetteville	21
	Selected Arkansas and U.S. Economic Indicators	23
	Cumulative Index	38

U5930-1 (A)
JUL 9 1982

Volume 15, Number 1
1982

Arkansas Business and Economic Review

A Publication of the University of Arkansas

contents

Estate Planning After the 1982 Tax Act

Quality and Value Perceptions of Arkansas Consumers for National, Private, and Generic Brand Grocery Products

100 Years of Arkansas Tornadoes: 1879-1979

One More Effect of the Arkansas Usury Law

Economic Efficiency Vs. Equity: The Pendulum Swings

Selected Arkansas and U.S. Economic Indicators

Arkansas Business and Economic Review

B.A. NUGENT
Chancellor, University of Arkansas, Fayetteville
JOHN P. OWEN
Dean, College of Business Administration
PHILLIP H. TAYLOR
Director, Bureau of Business and Economic Research
JOSEPH A. ZIEGLER
Senior Research Associate

HARRY FRENCH
Associate Economist
HELEN MCGREW
Research Assistant
TERESA OSBORNE
Research Assistant

WILLIAM FLYNN
Office Manager
SHERRYL E. LAUBACH
Assistant to Editor
PATTI TEASDALE
Bureau Secretary
QUINTON GEANS
Office Assistant

The *Arkansas Business and Economic Review* is published quarterly by the College of Business Administration as a public service and mailed on request without charge to addresses in the U.S. The articles published do not necessarily represent points of view of the Editor or the University.

The College of Business Administration is fully accredited by the American Assembly of Collegiate Schools of Business. The Bureau of Business and Economic Research is a member of the Association for University Business and Economic Research and The Travel Research Association.

The cover design was created by Printing Services, University of Arkansas.

Reprints of *Review* articles are available from the Bureau at a rate of $1.00 for the first copy and 50 cents for each additional copy.

NOTICE

Individuals wishing to be added to the mailing list should send name, address and zip code to the Bureau of Business and Economic Research. If you are moving and wish to continue to receive the *Arkansas Business and Economic Review,* please send us the address label and your new address.

TABLE OF CONTENTS

VOLUME 15 **Number 1**

PAGE

Estate Planning After the 1982 Tax Act 1

Warren E. Banks
Professor of Finance
University of Arkansas, Fayetteville

Quality and Value Perceptions of Arkansas Consumers for National, Private, and Generic Brand Grocery Products 4

Jon M. Hawes
Assistant Professor of Marketing
University of Akron

Stephen P. Hutchens
Assistant Professor Marketing
Creighton University

John Thanopoulos
Instructor
University of Arkansas, Fayetteville

100 Years of Arkansas Tornadoes: 1879-1979 11

John G. Hehr
Chairman, Department of Geography
University of Arkansas, Fayetteville

John R. Baldwin
Graduate Assistant
University of Arkansas, Fayetteville

One More Effect of the Arkansas Usury Law 22

Richard K. Ford
Assistant Professor Economics
University of Arkansas at Little Rock

Sylvia Borchert
Honor Student in Finance
University of Arkansas at Little Rock

Economic Efficiency Vs. Equity: The Pendulum Swings 25

Thomas R. McKinnon
Director, Bessie B. Moore Center for Economic Education
University of Arkansas, Fayetteville

Selected Arkansas and U.S. Economic Indicators 28

REVIEW EDITORIAL POLICY STATEMENT

In an effort to ensure that the articles appearing in the *Review* meet standards consistent with the goals of the College of Business Administration and of the University of Arkansas, an Editorial Advisory Board has been created to referee manuscripts submitted for publication. The current members of the Board are:

Jack E. Adams, University of Arkansas, Little Rock
Phillip W. Balsmeier, Louisiana Tech University
Michael W. Butler, University of North Alabama
G. James Francis, Colorado State University
David E. R. Gay, University of Arkansas, Fayetteville
John Kane, University of Arkansas, Fayetteville
Dale A. Level, University of Arkansas, Fayetteville
Harvey Lewis, University of Mississippi
John E. McCain, University of Arkansas, Fayetteville
James Millar, University of Arkansas, Fayetteville
C.P. Rao, University of Arkansas, Fayetteville
Eugene Sauls, California State University—Chico
Lloyd Seaton, Jr., University of Arkansas, Fayetteville
Donald White, University of Arkansas, Fayetteville
Joseph Ziegler, University of Arkansas, Fayetteville

The *Arkansas Business and Economic Review* is dedicated to information relevant to the business and economic environment of Arkansas. Manuscripts are solicited in these general subject areas:

1. Problems and issues of the Arkansas business community and economy;
2. Regional and industrial problems that have implications for the Arkansas economic community;
3. National business and economic issues of general interest to the people of Arkansas; and
4. Business and economic theory.

As a minimum, to be accepted for publication a manuscript must have literary value and the research upon which it is premised must have been conducted in a scientifically valid manner. Thereafter, the order of enumeration of the subject areas designates the system of priorities that will be applied in ascertaining the publishability of a manuscript. (However, the system of priorities will not be applied in such a way as to completely exclude any of the four categories of articles.)

Form requirements for manuscripts include double spaced originals with each chart or graph prepared in ink (camera ready) on a separate sheet. Manuscripts and all inquiries should be addressed to Editor, *Arkansas Business and Economic Review,* Bureau of Business and Economic Research, College of Business Administration, University of Arkansas, Fayetteville, Arkansas 72701, Telephone (501) 575-4151.

ESTATE PLANNING AFTER THE 1982 TAX ACT

Warren E. Banks
Professor of Finance
University of Arkansas, Fayetteville

One of the major surprises of the Economic Recovery Tax Act of 1981 was its curtailment of the so-called unified transfer tax, better known as the estate and gift tax. This sweeping change has caused some comment to the effect that the field of estate planning (used here to describe the systematic minimization of estate and gift taxation) may now be dead or dying. The purpose of this paper is to review selected features of the new law and to examine the effects they may have upon the estate planning function.

MAJOR CHANGES

Though many estate and gift changes were made by the new Act, five principal ones stand out. First, gradual increases in the transfer tax credits (from 1982 through 1987 and thereafter) have produced "equivalent exemptions" in each of these years as follows: $225,000; $275,000; $325,000; $400,000; $500,000; and $600,000. This means that after all deductions are made a decedent may leave a net estate in the foregoing amounts and still incur no tax liability.

Second, major relief has come in the form of the long-awaited 100% marital deduction, applicable to transfers both by death and by gift. This affords substantial protection at the death of the first spouse.

Third, while rates on taxable transfers of less than $2,500,000 remain the same, a gradual reduction (from 1982 through 1985 and thereafter) of rates from 70% down to 50% on transfers in excess of that amount is built into the new law.

Fourth, the annual gift tax exclusion has been increased from $3,000 to $10,000 per donee.

Fifth, the inclusion of jointly-owned property in the estate of the first to die depending upon the amount of consideration contributed by the decedent toward its purchase has been abolished, at least for property held by husband and wife. Now, 50% of the property is included in decedent's estate regardless of his or her contribution. While this obviates the troublesome problems of the so-called "accidental gift" that may occur when one person buys property and lists it in two names, the relief is limited to interspousal acquisitions. If the two names in which the property is listed are not those of husband and wife, the old rules presumably still apply and it is possible for the transaction to be treated as a taxable gift and the property as an asset in the estate of the decedent who furnished the consideration with which it was purchased.

SOME EFFECTS OF THE NEW LAW

One estimate suggests that the new law, when fully effective, will be worth $3 billion a year to taxpayers and that more than 95% of the estates that previously were taxable will be free of tax.[1] It also has been estimated that the pre-1982 transfer tax provided less than 2% of federal revenues, so that the recent changes may have only a minor effect upon government collections.[2]

To the extent that major reductions have been made for high bracket taxpayers, fears have been expressed that there will be less incentive for these

individuals to rearrange ownership of their properties for tax minimization purposes. If the estate tax is to dwindle, the need for insurance proceeds with which to pay the tax should fade with an adverse effect upon the insurance industry. If assets are no longer subject to tax at death, the incentive to give them away to charitable organizations (during life or at death) could diminish. Some donees have begun to express apprehension about this.[3]

Of course, reducing the number of taxable estates should relieve much of the pressure to liquidate or to encumber small businesses in order to meet death tax levies. However, to the extent that the estate tax is reduced at the death of a married decedent because of the new 100% marital deduction, the tax problem may merely be postponed till the death of the surviving spouse. In that instance the survivor may still need to carry tax-oriented insurance, to consider the feasibility of gifts and bequests to charities, and to face the problem of preserving the small business. To that extent, it is clear that estate planning is a field that is far from defunct.

SOME EFFECTS OF INFLATION

As the $600,000 equivalent exemption is to be phased in over a six-year period, inflation could make substantial inroads on the "size" of this exemption in terms of 1982 dollars. The following table shows the present value of $600,000 discounted 6 years at various assumed inflation rates:

Present value	Rate of Inflation
$423,000	6%
378,000	8
339,000	10
304,200	12
273,600	14
246,000	16

It is evident that the present value of the 1987 equivalent exemption may not be too far from the 1982 $225,000 equivalent exemption, depending upon the rate that is assumed. At a 16% rate the $600,000 exemption has a present value of $246,000 which is only $21,000 more than the 1982 exemption. Even at a 10% rate the $600,000 exemption shrinks to $349,000. Naturally, at relatively low rates such as 6% the present value is ample to cover the 1982 exemption.

Of course, the table assumes inflation at a constant rate, which surely will not be the case. Inflation might even disappear! However, if it should continue at relatively high rates the $600,000 equivalent exemption will eventually need to be raised or the burden of the tax will return.

OTHER CONSIDERATIONS

It has been suggested that rate reduction for the "wealthy" was the whole point of the 1981 Act.[4] Whether this is true or not, the spectre of continued budget deficits conceivably could cause a rethinking of the desirability of all tax reductions and eventually lead to some tax reinstatement. This is true for transfer tax changes despite the fact that revenues from this source constitute an insubstantial part of government tax collections.

Though tax return preparation will be curtailed by the 1981 Act, there are many areas in which counsel will still be needed. For example, countless last wills and testaments geared by use of a formula clause to the pre-1982 marital deduction may well be in dire need of revision. A transitional rule may deny the new 100% deduction for instruments executed under the old law unless they are amended or state law extends the new deduction to formula clauses created at such earlier time. Further, state transfer taxes will need to be re-examined. This is especially true for states such as Arkansas that have a so-called "pick-up" tax, i.e., one that merely taxes the estate in what-

ever amount would be allowed on the federal return as a maximum credit for any state tax paid.

More than transitional estate planning will still be needed for transfers other than those between husband and wife, merely because so much of the new legislation is directed only at interspousal relief. In addition, counsel still may be needed concerning gifts "in contemplation of death." The Code might now appear to be free at least from this troublesome rule affecting gifts made within three years of death. However, its removal does not apply to insurance policies whose transfers within three-year period may be ineffectual in removing such contracts from the estate.

It is interesting to consider the question of valuation of assets, especially in the filing of a no-tax information return. Heretofore, it has often been advantageous for the representative of the decedent-taxpayer to value includible property as low as possible so as to minimize the transfer tax. Conversely, the IRS has occasionally seemed to favor a higher value so as to raise tax revenues. Should an estate that would be taxable under the old law now be free of transfer tax liability, might not the personal representative find it advantageous to *maximize* the value of the asset for the purpose of any information return that might be required? The purpose presumably would be to make full use of the stepped-up basis that can be transferred on appreciated property and minimize the capital gains tax to which the beneficiaries would be subjected on any resale. Similarly, might not the IRS now find itself in the new and unusual position of arguing that the personal representative has *overvalued* the asset in the return and that it should be appraised more conservatively? Thus, valuation may be no less important under the new law than it was under the old; and it may even assume new directions.

CONCLUSIONS

All of the foregoing suggests that the field of estate planning may be less in a state of eclipse than in a state of metamorphosis. Further, if the consequences of the new law resembles those of previous attempts at "reform" and "simplification," some professional estate planners may end up more in demand than ever before.

---

[1] Wall St. J., June 17. 1981, at 25, col. 4
[2] Wall St. J., June 22, 1981, at 23, col. 1
[3] Wall St. J., July 28, 1981, at 29, col. 3
[4] *The Atlantic Monthly*, Dec. 1981, at 47.

QUALITY AND VALUE PERCEPTIONS OF ARKANSAS CONSUMERS FOR NATIONAL, PRIVATE, AND GENERIC BRAND GROCERY PRODUCTS

Jon M. Hawes
Assistant Professor of Marketing
University of Akron

Stephen P. Hutchens
Assistant Professor of Marketing
Creighton University

John Thanopoulos
Instructor
University of Arkansas, Fayetteville

INTRODUCTION

The Battle of the Brands is a popular phrase which has traditionally referred in the marketing literature to the competition between the brands sponsored by manufacturers and those sponsored by distributors. In the late 1970's, this competition was significantly altered by the introduction and subsequent marketing of generic grocery products.[1] These "no-frills" products were introduced in France during 1976 and the concept quickly spread to other countries. Jewel Food Stores was the first supermarket chain to offer generics in the United States. Jewel began selling generics in 1977 in the Chicago area, and the Dillon Stores introduced generics to the Arkansas market during 1978.[2]

While most natural and private brand grocery products were USDA Grade A or (to a lesser extent) Grade B, most generic food products were Grade C.[3] This lower level of quality, which many consumers found acceptable, enabled marketers to offer generic grocery products at relatively low prices. In fact, the retail selling price of a generic item was frequently as much as 40 percent lower than that of respective national brands, and approximately 20 percent less than that of competing private brands.[4] Inflation-weary consumers quickly responded to the availability of generics by purchasing far more of the austerely packaged items than marketers had expected. Many supermarkets quickly added the new line of products to their assortment, and by May of 1981, it was estimated that 50 percent of the 33,000 supermarkets in the United States were selling generic grocery products.[5]

While aggregate measures demonstrated the sales success of generics, the popularity of the new brand category varied widely throughout the particular markets of the United States during the late 1970's and early 1980's. Generics achieved relatively high levels of market penetration in Boston, Chicago, Denver, Detroit, Los Angeles, and in areas where cyclical economic distress was most severe. In addition, the extent of competition within particular markets and the extent of marketing support provided for generics by supermarket chains had considerable impact on the sales volumes achieved by the new brand category.

Generics have achieved lower levels of market penetration in Arkansas than in the geographic areas listed above, but it is evident that the new line of "no-frills" products has had an important impact on the Battle of the Brands in Arkansas.[6]

The impact of generics on the brand structure for grocery products in Arkansas is examined in this paper by:

1. examining the perceptions of Arkansans toward the *quality* offered by each of the three brand categories,
2. examining the perceptions of Arkansans toward the **value** offered by each of the three brand categories, and
3. examining the extent of the statistical association between each of the above perceptions and Arkansans' purchase intentions for each of the brand categories.

The article first provides some necessary background information concerning brand structural considerations. Next, a description of the research procedure and the results of a study of the quality and value perceptions of Arkansas consumers toward each of the brand categories are presented. The implications for the Arkansas grocery industry are also discussed.

BRAND STRUCTURE CONSIDERATIONS

Brand structure refers to the nature of the composition of brands available within a particular market. In analyzing the brand structure of the grocery products market, researchers have traditionally found it useful to classify brands as those sponsored by manufacturers (usually referred to as "national brands") and as those sponsored by distributors (frequently called "private brands").[7] The brand structure of the U.S. supermarket industry has been the subject of much research. In fact, some of the early brand structure studies of the grocery industry conducted by the Federal Trade Commission during the 1930's are regarded as having had a major impact on the development of the marketing discipline.[8] Subsequent studies relating to the brand structure of the grocery industry in the mid 1950's by Cole, DeBoer, Millican, and Wedding,[9] and in the early 1960's by the National Commission on Food Marketing are also acknowledged as important contributions to the marketing literature.[10] In addition, a study conducted by Cook and Schutte for the Marketing Science Institute in the mid-1960's greatly enhanced the understanding of the brand structure within the grocery industry as well as in several others.[11]

Since the publication of these important studies, however, significant modifications in the brand structure have occurred due to the introduction of generics. These changes suggest the need for additional research. Generics present researchers with some interesting research problems, and the fact that generic grocery products cannot be readily categorized as manufacturer-sponsored or distributor-sponsored brands is of particular interest. Generics do not seem to fit into either of the above categories because most generic grocery products exhibit the noticeable absence of *any* traditional brand name. The labels of most generic items include only the information required by the federal government and the descriptive name of the product in the package (e.g., "Tomato Sauce", "Dog Food", or "Orange Juice"). Therefore, some researchers have proposed that generic grocery products constitute a distinct, third dimension in the brand structure of the U.S. supermarket industry.[12]

RESEARCH PROCEDURE

In order to evaluate the impact of the introduction of generics on the Battle of

the Brands in Arkansas, members of the Arkansas Household Research Panel (AHRP) were surveyed. This panel consists of approximately 500 households that have been selected through a stratified, systematic random procedure to provide an adequate representation of the Arkansas public.[13]

A questionnaire was developed to collect data from panel members. A pretest of the survey instrument revealed that many consumers did not understand the terms often used to identify the three brand categories. This was not unexpected, as the National Commission on Food Marketing reported a similar research problem in the early 1970's.[14] In order to provide all respondents with a common frame of reference, the first section of the questionnaire was modified to include a definition and examples for each of the brand categories.

The questionnaire was administered to the AHRP and a response rate of over 80 percent was achieved as 455 Arkansas families participated in the research project. Panel members were informed that the survey should be completed by the household member responsible for most of the family's *grocery* shopping. Since virtually all households purchase grocery products, it was assumed that respondents were familiar with, and were purchasers of, grocery products.

Data pertaining to the perception of quality and value offered by each of the brand categories were collected by asking panel members to express their relative degree of agreement or disagreement to a series of pertinent statements. Order, or position bias, was minimized by randomly placing the quality and value statements in a section of the questionnaire containing several other unrelated Likert-type statements. In addition, the format of the quality and value statements was varied in an attempt to reduce testing bias.

RESEARCH RESULTS

The statements employed to measure the perception of quality and value for each brand category are shown in Exhibit 1. The tabulation of responses is also presented.

Respondents indicated relatively favorable perceptions of the quality and value offered by national brands. This was not unexpected. National brands were frequently purchased and held market shares of approximately 80 percent in most grocery product categories in the United States at the time of the survey.[15]

The responses of AHRP members to the statement concerning the quality of private brands demonstrated a less than totally accurate perception of the physical quality of these grocery products. In actual taste tests and in USDA grading tests, it has been determined that private brand grocery products usually offer a level of quality equal to, and sometimes even better than, that of national brands.[16] Only 57.9 percent of the respondents, however, expressed some level of agreement to the statement that the quality of private brands is "just as good as the quality of national brands." Thus, over 40 percent of the respondents were not aware of the similar levels of quality. Perhaps this is because few marketers of private brands advertise or otherwise promote the quality of their products.

The mean score of 3.35 regarding the value offered by private brands was also somewhat lower than expected. Perhaps a large number of consumers were not aware of the extent of price savings that private brands usually offer in comparison to national brands. On the other hand, this finding might indicate that the price gap between national and private brands in Arkansas was of a smaller magnitude than it was in other parts of the United States at the time of the study. No data were available to pre-

Exhibit 1
PERCEPTIONS OF ARKANSAS HOUSEHOLD RESEARCH PANEL

Statement	Percent of Respondents Indicating: Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree	Mean*
National Brands							
National brands are higher in quality than private or generic brands	4.3	17.1	24.0	33.1	15.3	6.2	3.56 (N=438)
Even though they cost a little more, national brands are still worth it	5.4	14.7	24.5	29.5	20.6	5.2	3.61 (N=441)
Private Brands							
I think that the quality of private brands is just as good as the quality of national brand products	3.4	13.9	24.8	36.2	16.2	5.5	3.64 (N=439)
Generally, private brand products are a better value than national brands	7.7	20.1	26.0	25.7	16.7	3.8	3.35 (N=443)
Generic Brands							
Generic brand products are just as good as national or private brands	7.3	17.4	25.2	33.9	10.8	5.3	3.39 (N=436)
Generic brands are a better value than national or private brands	10.1	20.1	30.9	23.7	11.9	3.3	3.17 (N=427)

*Where Strongly Disagree = 1, Disagree = 2, Somewhat Disagree = 3, Somewhat Agree = 4, Agree = 5, and Strongly Agree = 6. "N" refers to the number of respondents to that statement.

cisely document the extent of the price gap in Arkansas as compared to other states, but this issue would appear to warrant additional investigation in future research.

AHRP members were not convinced of the lower quality of generics. Despite the "tell-it-like-it-is" manner in which generics were packaged and marketed, about 50 percent of the respondents expressed some level of agreement to the statement that generics are "just as good as national or private brands." This was somewhat surprising when one considers the fact that the following apologetic labeling was often used for generic food products:

> Good, wholesome foods of USDA standard grade or better. Uniformity of color, size, and texture may vary from the uniformity found in higher grades.

Perhaps the reason for the perception of nearly equal quality of generics can be attributed to the minimal importance associated with some of the criteria which are used as the basis for grading agricultural products by the United States Department of Agriculture.

The distribution of responses for the value statement pertaining to generics revealed that many Arkansans did not recognize the extent of the price savings offered by the new line of "no-frills" products. Other researchers have found that consumers in other parts of the U.S. also tend to underestimate the magnitude of the price gap between generics and each of the other two brand categories.[17] Of course, it is also possible that the price

savings offered by generics in Arkansas was of a lower magnitude than the price savings provided by generics in other parts of the country. Unfortunately, as was previously stated in reference to private brands, data which document the price levels for each of the brand categories in Arkansas were not available.

One section of the questionnaire called for respondents to indicate, on a five-point scale, their purchase intentions for eleven products in each of the three brand categories. By summing these purchase intention scores over each of the brand categories, it was possible to classify each respondent as: "national brand-prone", or "private brand-prone", or "generic brand-prone".[18] Cross-tabulations of brand-proneness and perceptions of quality and of value for each of the brands were then conducted. Chi Square tests of statistical independence were computed and it was found that for each of the six cross-tabulations, there was a significant statistical association between the respondents' perceptions of quality or value for the brand and their purchase intentions. In each case, the statistical associaiton was in the expected direction: respondents who held relatively favorable perceptions of the quality or the value for a given brand category had a higher probability of being included as members of that brand-prone group. While causal statements are not appropriate, this finding provides strong support for the argument that a consumer's perception of the quality and value offered by a brand is statistically related to the consumer's purchase intentions for that brand. This finding also provides empirical evidence to advance the notion that perceptions of quality and value are important factors which consumers consider in the selection of grocery products and further suggests that an effective strategy to increase sales may begin with an attempt to improve the brand's image on these dimensions.

Space limitations prohibit the inclusion of all six of the cross-tabulations, but analysis for the quality perceptions are shown in Exhibit 2. In order to facilitate the presentation, the response categories for the Likert-type statements were aggregated into the disagree/agree dichotomy shown. The statistical significance of the results did not vary, however, from that obtained for the full range of six response categories.

DISCUSSION

The introduction and subsequent marketing of generic grocery products has had a major impact on the brand structure of the supermarket industry. Arkansans' interest in generics, however, appears to be somewhat lower than that of consumers in other parts of the United States. This would suggest that grocers in Arkansas should be somewhat more cautious about the introduction of generic products in their stores and/or the amount of display space provided for the line of products. Careful monitoring of sales is warranted due to regional variations and the results should be compared with statistics on a regional or national basis.

The results of this research also suggest an opportunity for Arkansas retailers. To a considerable extent, Arkansas consumers did not recognize the quality or value advantages offered by private and generic brand grocery products. A marketing communications program designed to provide additional information to Arkansas grocery shoppers about these brand categories would appear to have potential for success. In-store programs, because of their low cost and the opportunity for local adaptation and control, which describe the quality and the extent of price savings offered by these brands would warrant consideration. Limited

Exhibit 2
CROSS-TABULATIONS OF PERCEPTION OF QUALITY BY BRAND-PRONENESS

"National brands are higher quality than private and generic brands."

Brand-proneness	Disagree	Agree	ROW TOTAL
National	f = 109 E(f) = 124.9	f = 170 E(f) = 154.1	f = 279
Private	f = 17 E(f) = 12.7	f = 6 E(f) = 10.3	f =23
Generic	f = 28 E(f) = 18.8	f = 14 E(f) = 23.2	f = 42
COLUMN TOTAL	f = 154	f = 190	
Chi Square = 19.713		alpha =.0001	

"I think that the quality of private brands is just as good as the quality of national brand products."

Brand-proneness	Disagree	Agree	ROW TOTAL
National Private Generic	f = 132 E(f) = 118.4	f = 147 E(f) = 160.6	f = 279
	f = 4 E(f) = 9.8	f = 19 E(f) = 13.2	f =23
	f = 10 E(f) = 17.8	f = 32 E(f) = 24.2	f = 42
COLUMN TOTAL	f = 146	f = 198	
Chi Square = 14.586		alpha =.0007	

"Generic brand products are just as good as national or private brands."

Brand-proneness	Disagree	Agree	ROW TOTAL
National	f = 170 E(f) = 148.4	f = 109 E(f) = 130.6	f = 279
Private	f = 9 E(f) = 12.2	f = 14 E(f) = 10.8	f =23
Generic	f = 4 E(f) = 22.3	f = 38 E(f) = 19.7	f = 42
COLUMN TOTAL	f = 183	f = 161	
Chi Square = 40.7		alpha =.0001	

where: f = frequency
E(f) = Expected frequency under the hypothesis of statistical independence
alpha = probability that the statistical association was due to chance alone

informational advertising, especially as a section of the store's weekly newspaper advertisement, would also provide the opportunity to modify some of the misperceptions concerning these brands which do offer price advantages.

Whatever one's opinion is of the relative merits of each brand category, the dynamic nature of the brand structure of the grocery products industry will continue to be the subject of much research and debate. This article has reported the results of some exploratory research concerning the perceptions of Arkansans toward the quality and value offered by national, private, and generic brand grocery products. The research also provided some interesting findings concerning qualty and value as predictors of purchase intentions. These factors warrant additional attention from marketers with an interest in the continuing Battle of the Brands.

---

[1]For a lengthy review of the retail marketing practices employed for generics, see: Jon M. Hawes and G.E. Kiser, "A Review of Retailing Practices for Generic Grocery Products," *Akron Business and Economic Review*, 13 (Spring 1982), pp. 37-43.

[2]Frank Soltan, "Topco Offering a Line of Generic Products," *Supermarket News*, 27 (February 20, 1978), p. 4.

[3]Charles Handy and Naamon Seigle, "Generic Labeling," *National Food Review*, (September 1978), p. 18.

[4]Charles G. Burck, "Plain Labels Challenge the Supermarket Establishment," *Fortune*, 99 (March 26, 1979), p.70.

[5]"No-Frills Food: New Power for the Supermarkets," *Business Week*, (March 23, 1981), p. 72.

[6]Sally Bell, "Generics' Big Success Story Surprises Brookshire Food Stores in Texas, Arkansas, and Louisiana," *Supermarket News* 30 (May 26, 1980), p. 4; Sally Bell, "Generics, New Formats Lag in Conservative Markets," *Supermarket News*, 30 (August 18, 1980), Section 2, p. 10; Jan Calkins, "Northeast Operators Ship More Generic Products, SAMI Reports," *Supermarket News*, 31 (October 5, 1981), Section 1, p. 29.

[7]William Applebaum, "Perspective on Food Manufacturers' and Distributors' Brands in the United States," in *Brand Strategy in United States Food Marketing*, (Boston, MA: Division of Research, Graduate School of Business Administration, Harvard University, 1967), pp. 4-5; or Thomas F. Schutte, "The Semantics of Branding," *Journal of Marketing*, 33 (April 1969), pp.5-11.

[8]Federal Trade Commission, *Chain Store Inquiry*, (Washington, DC: U.S. Government Printing Office, 1933).

[9]Robert H. Cole, Lloyd M. DeBoer, Richard D. Millican, and Nugent Wedding, *Manufacturer and Distributor Brands: Some Facts and Issues*, (Urbana, IL: University of Illinois, 1955).

[10]National Commission on Food Marketing, *Special Studies in Food Marketing, Technical Study No. 10*, (Washington, DC: U.S. Government Printing Office, June 1966).

[11]Victor J. Cook and Thomas F. Schutte, *Brand Policy Determination*,(Boston, MA: Allyn and Bacon, Inc., 1967).

[12]Dub Ashton, "National, Private, and Generic Brands: A Consumer Descriptive Analysis," in *Proceedings, Midwest Institute for Decision Sciences, 1979 Conference*, H. Robert Dodge and Gary L. Pielmeier, editors, (Chicago: American Institute for Decision Sciences, 1979), pp. 225-228.

[13]Donna K. Darden, William R. Darden, and G.E. Kiser, "The Marketing of Legal Services," *Journal of Marketing*, 45 (Spring 1981), p. 124; or William R. Darden, Donna K. Darden, and E.W. Boatwright, "Social Indicators in Arkansas, 1981: A Cautious Reversal," *Arkansas Business and Economic Review*, 14 (Fall, 1981), p. 11.

[14]National Commission on Food Marketing, op. cit., p. 80.

[15]Ralph Selitzer, "Generic Sales Top One Billion Dollars," *Private Label: The Magazine for House Brands and Generics*,3 (June-July 1981), p. 14.

[16]Cole, et al, loc. cit.; Handy and Seigle, loc. cit.; "Big Savings in Small Packages: No-Names vs. Private Labels vs. Name Brands," *Consumer Reports*, 43 (June 1978), p. 316.

[17]Walter Heller, "Generics Shoppers Six Months Later—A 'Passing Fancy' Settles In," *Progressive Grocer*, 57 (August 1978), pp. 77-80.

[18]If any of the responses to the 33 purchase intentions or the six quality and value statements was incomplete, the questionnaire was eliminated from consideration in the subsequent cross-tabulations.

100 YEARS OF ARKANSAS TORNADOES: 1879-1979

John G. Hehr
Chairman, Department of Geography
University of Arkansas, Fayetteville

John R. Baldwin
Graduate Assistant
University of Arkansas, Fayetteville

INTRODUCTION

The state of Arkansas is positioned in the southcentral interior of the United States in close proximity to the region of maximum tornado occurrence in Oklahoma. In the core area of "tornado alley" about 55 tornadoes occur in the average year, while Arkansas averages 18 tornadoes per year (Figure 1). Because of the unique topography of Arkansas, the distribution of tornadoes within the state is not uniform, but exhibits instead areas that are highly favored for tornado occurrence and other regions where tornadoes are infrequent. The purpose of this paper is to update two early tornado climatologies for Arkansas. Included within the study is a map of tornado distribution for the period 1879-1979, an analysis of direction of tornado movement, and the preferred tornado occurrence intervals on a monthly and daily basis.

EARLY TORNADO CLIMATOLOGIES

Two researchers have constructed tornado climatologies for the state of Arkansas. Cole, in 1927, mapped the trajectories of a small number of documented tornado occurrences.[1] He also reported on the variation in occurrence intervals on a daily and seasonal basis. Asp, in 1956, constructed the second climatology which also included a map of documented tornado trajectories for the time period 1879-1955.[2] He made special reference to the apparent control that the diverse topography of Arkansas may exert upon tornado distribution. Asp was careful to indicate that a population bias may partially account for areas within the state where increased tornado occurrence apparently exists (Figure 2).

ARKANSAS TORNADO UPDATE

In the present 100 year study period, 1879-1979, there were 995 documented tornado occurrences in Arkansas. These data were obtained from Cole, *Storm Data, Climatological Data,* and cross-referenced with a National Weather Service publication entitled *Significant Arkansas Tornadoes.* The study period can be broken into two time periods: 1879-1952 and 1953-1979. During the earlier 73 year period 42 percent of Arkansas tornadoes were recorded while the remaining 58 percent were reported in the 1953-1979 time period. In the early 1950's, the National Weather Service improved the tornado reporting network by working in cooperation with Civil Defense agencies, law enforcement agencies, the military, and interested citizens. The result was a significant increase in the number of tornado reports and improved mapping of individual events. Improvement in radar detection of tornadoes late in the study period has also increased the accuracy of the reporting network.

The Arkansas tornado trajectory map for the 1879-1979 period reveals several

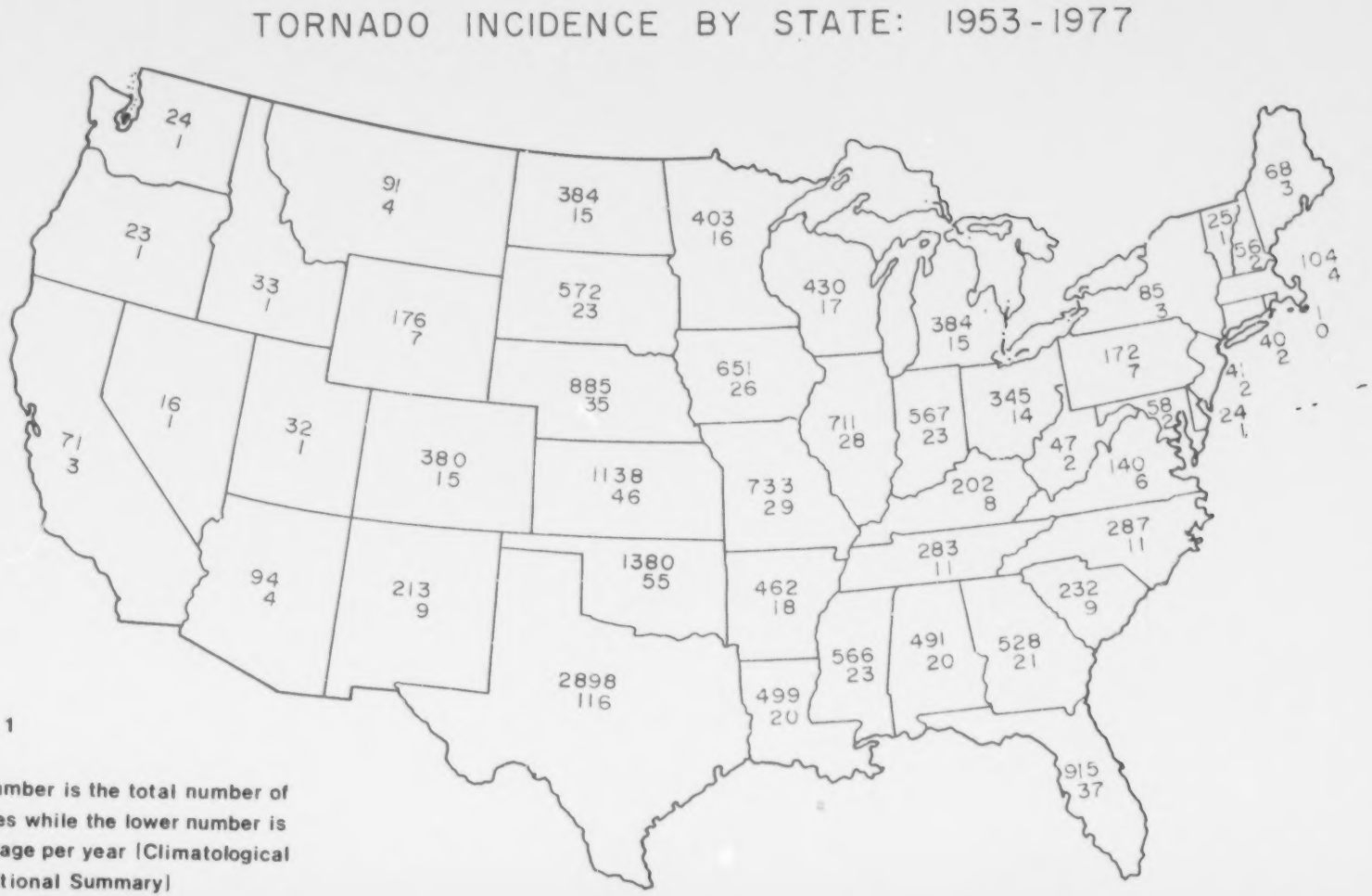


FIGURE 1

Upper number is the total number of tornadoes while the lower number is the average per year (Climatological Data National Summary)

THE PHYSIOGRAPHIC PROVINCES OF ARKANSAS

FIGURE 2

areas of concentration or "alleys" and areas of reduced frequency or "shunted" regions (Figure 3). Comparison of the earlier Asp map and the updated map show similar alley and shunted regions. Areas of tornado concentration include the Springfield Plateau in the northwest section of the state; the Arkansas River Valley; and the boundary region of the Arkansas upland area, the Gulf Coastal Plain, and the Mississippi Embayment. Areas of tornado concentration appear to be located in regions of low local relief while shunted regions are associated with areas of increased local relief in the Boston and Ouachita Mountain regions. A secondary shunted region exists along the Mississippi River.

Cole and Asp both noted in their climatologies that tornado alleys existed in regions of low local relief while shunted areas appeared in the mountains. Asp attributed this distribution to a population bias. He thought that the densely populated low relief regions would result in a higher incidence of tornado reports. Other researchers have studied the tornado distribution problem in the state of Arkansas. Gallimore, in a 1968 study of topographical influence on tornado tracks in Arkansas, noted several "holes" or shunted regions in the Boston and Ouachita Mountains.[3] He used spectral analysis to test the importance of terrain on tornado formation and path length. Gallimore concluded that terrain does indeed result in shunted regions but offered no dynamic explanation. Safford, in 1970, studied the correlation between hail and tornado frequencies and topographic features with special interest devoted to the Ozark Plateau.[4] He concluded that the upland region and particularly the leeward side of the Ozarks was in fact a shunted region, but he also did not offer an acceptable dynamic explanation for reduced tornado frequency in highland regions.

Dohne, in 1980, studied the movement of high intensity thunderstorms over the Boston Mountain region for the spring periods of 1978 and 1979.[5] He utilized radar overlays from the National Weather Service radar station at Monet, Missouri, to track individual thunderstorms through the study area. It was found that only six percent of 91 intense thunderstorms passed over the Boston mountains. The vast majority of the thunderstorms passed over the Cherokee Plain and Springfield Plateau which are areas of low relief northwest of the Boston Mountains. Dohne concluded that few high intensity thunderstorms pass over the Boston Mountains during the spring tornado season which supports the findings of the tornado climatologies. A review of the literature indicates that highland regions such as the Boston and Ouachita Mountains, do in fact have few tornado passages but the dynamic causes are as yet not known.

The shunted region along the Mississippi River may be associated with the mean position of the spring period synoptic scale storm track. As the spring period progresses the mean position of the storm track moves northward. Studies by Borchert[6] and Bryson[7] indicate that the mean position of the synoptic scale storm track in early spring is such that tornado occurrence would be favored in the tornado alley along the boundary between the Ozark and Ouachita uplands and the Gulf Coastal Plain and Mississippi Embayment. The tornado trajectory map shows a concentration of tornado tracks along the mean storm track position. Furthermore, several of these tornadoes were very intense as evidenced by track widths. By mid-spring the mean storm track is positioned just northwest of Arkansas. In fact, the storm track position is over the Cherokee Plain and Springfield Plateau where a concentration of tornado tracks also occurs. This is

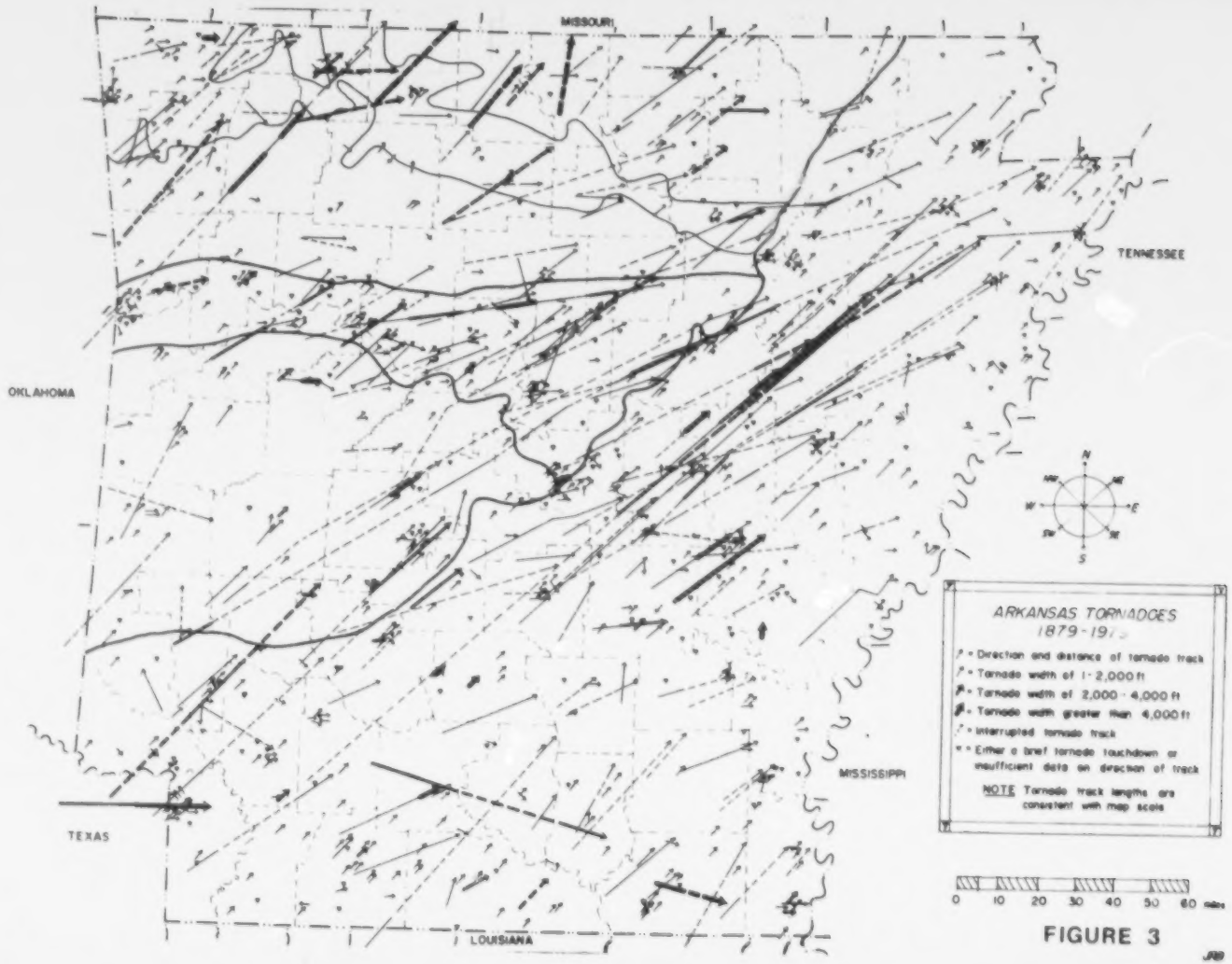

MISSOURI
TENNESSEE
OKLAHOMA
MISSISSIPPI
TEXAS
LOUISIANA
N
NE
E
SE
S
SW
W
NW
ARKANSAS TORNADOES
1879-19
Direction and distance of tornado track
Tornado width of 1-2,000 ft
Tornado width of 2,000-4,000 ft
Tornado width greater than 4,000 ft
Interrupted tornado track
Either a brief tornado touchdown or insufficient data on direction of track
NOTE Tornado track lengths are consistent with map scale
0 10 20 30 40 50 60 miles

FIGURE 3

the same area where Dohne found a concentration of high intensity thunderstorm tracks. In each of these cases, the position of the storm track would favor strong cumulonimbus clouds and possibly subsequent tornado development. The Arkansas River Valley would be favored for tornado development as the mean storm track position moved from its early springtime position to the area northwest of the state. The area along the Mississippi River may not lie in a region favoring strong cumulonimbus development.

The isoline map showing the distribution of Arkansas tornadoes indicates a concentration in the vicinity of major population centers (Figure 4). Asp, as indicated earlier, expected this because it is people who report tornadoes. In order to test the importance of population on tornado reports, Pearson's Product Moment Correlation was used to determine the degree of association between county tornado frequency and county population. The resulting correlation was not particularly high (.30), but suggested that some relationship between population and tornado occurrence does exist. However, when the greatly underpredicted and greatly overpredicted residuals were mapped, the results compared favorably with alley and shunted regions of tornado occurrence. This indicates that although there is a relationship between population and tornado reports, the areas which have been identified as having maximum or minimum activity can be thought of as such.

Directional preference of all Arkansas tornadoes was also analyzed (Figure 5). As would be expected, the southwest to northeast trending storms dominated. Asp indicated that 71.6 percent of Arkansas tornadoes moved to the northeast while the present study shows 67.7 percent. The national percentage for northeast trending tornadoes is 87 percent. It is suggested by these researchers that the topography of Arkansas results in a greater pecentage (12.6) of west to east moving tornadoes. This is evidenced in the Arkansas River Valley where tornadoes tend to parallel the valley's east-west orientation. There is also a relatively high percentage (5.3) of northwest to southeast moving tornadoes. These are probably associated with strong cold front passages where the parent cumulonimbus clouds move toward the southeast instead of parallel to southwest-to-northeast oriented cold fronts.

Peak tornado frequency in Arkansas occurs in April while it occurs nationally in May. There is also a conspicuous November secondary tornado maximum (Figure 6). The April maximum occurs as the mean synoptic scale storm track moves northward over the state. The secondary maximum in November probably is associated with the movement of the mean storm track southward over the state as it moves to its winter position. Some of the most intense Arkansas tornadoes have occurred during the November secondary maximum. Preferred hours of tornado occurrence in Arkansas are similar to those of other states (Figure 7). There is a strong concentration of activity in the late afternoon hours as the tornado occurrence curve follows the diurnal temperature curve closely. The increase of tornado occurrence at 9:00 a.m. can be explained by a single tornado family outbreak that resulted in an anomalous data set for that time.

CONCLUSION

In conclusion, the authors hope that updating the Arkansas tornado climatology will initiate further tornado research in the state. In particular, the relationship between topography and tornado incidence requires further examination. Empirical evidence appears

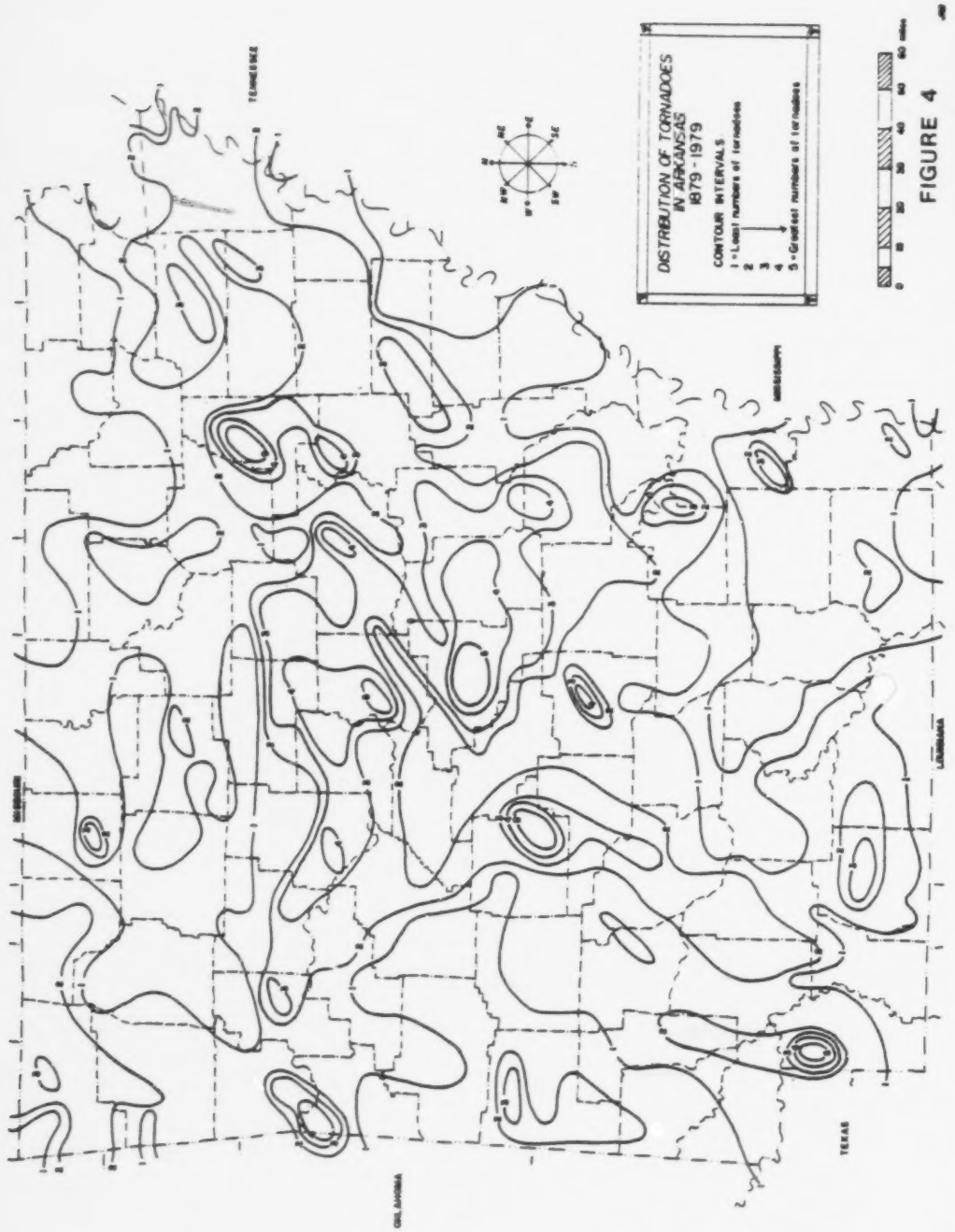

DISTRIBUTION OF TORNADOES
IN ARKANSAS
1879 - 1979
CONTOUR INTERVALS
1 - Least numbers of tornadoes
2
3
4
5 - Greatest numbers of tornadoes
TENNESSEE
MISSOURI
MISSISSIPPI
OKLAHOMA
LOUISIANA
TEXAS

FIGURE 4

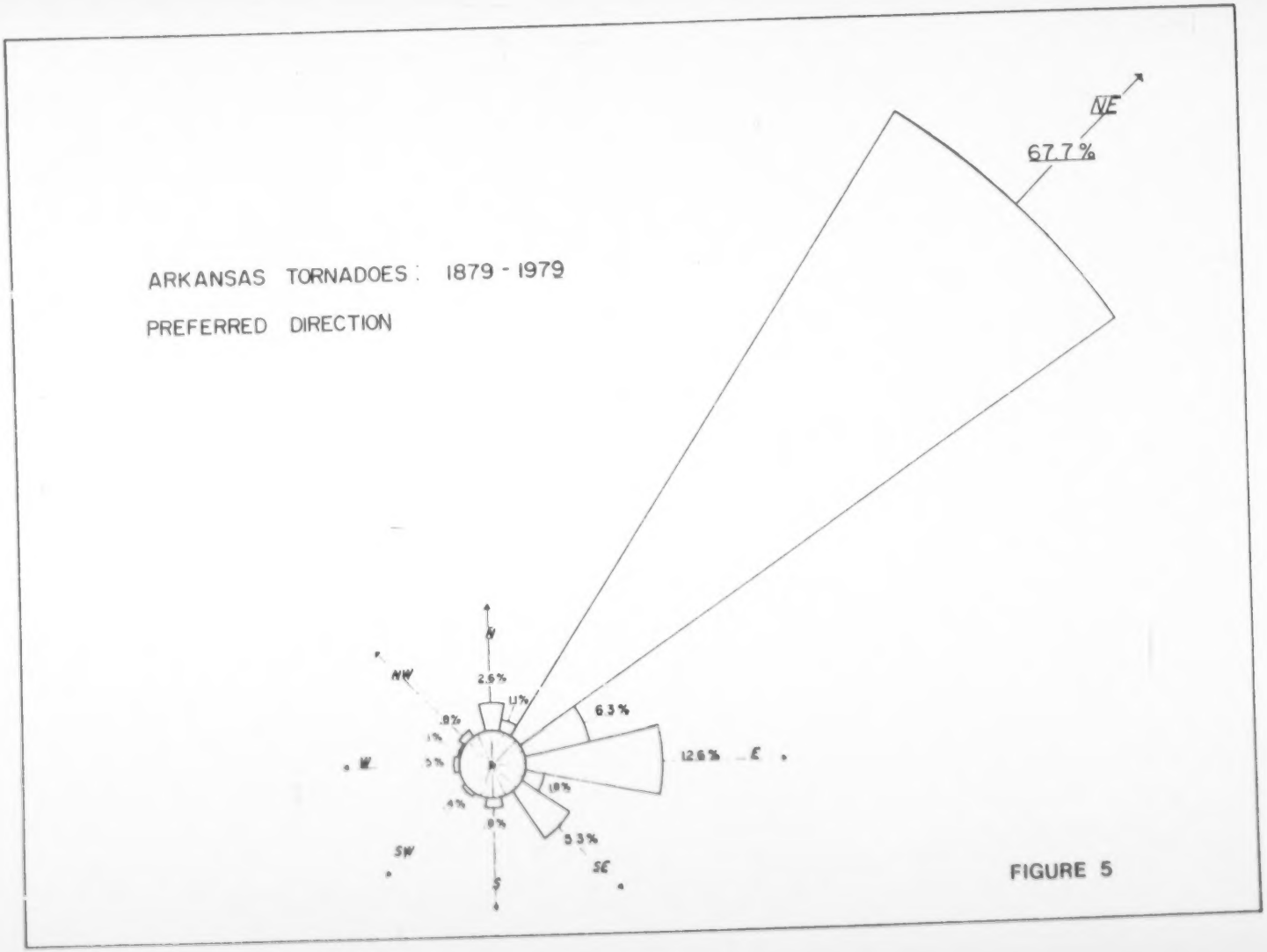

ARKANSAS TORNADOES: 1879 - 1979
PREFERRED DIRECTION
NE
67.7%
N
NW
2.6%
1.1%
.8%
6.3%
.1%
W
.5%
12.6%
E
1.8%
.4%
.9%
5.3%
SW
SE
S

FIGURE 5

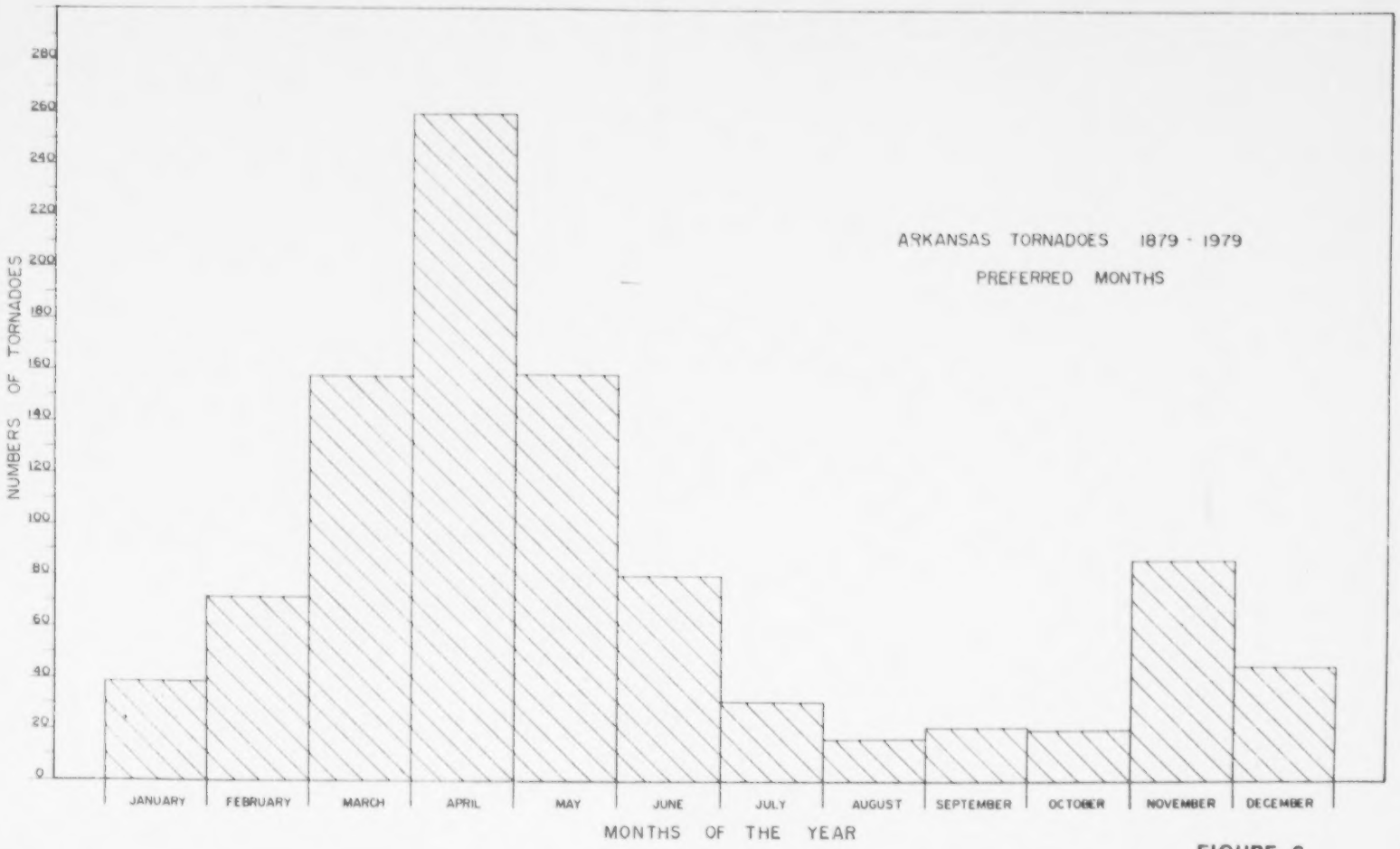

ARKANSAS TORNADOES 1879 - 1979
PREFERRED MONTHS
NUMBERS OF TORNADOES
0
20
40
60
80
100
120
140
160
180
200
220
240
260
280
JANUARY
FEBRUARY
MARCH
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER
NOVEMBER
DECEMBER
MONTHS OF THE YEAR

FIGURE 6

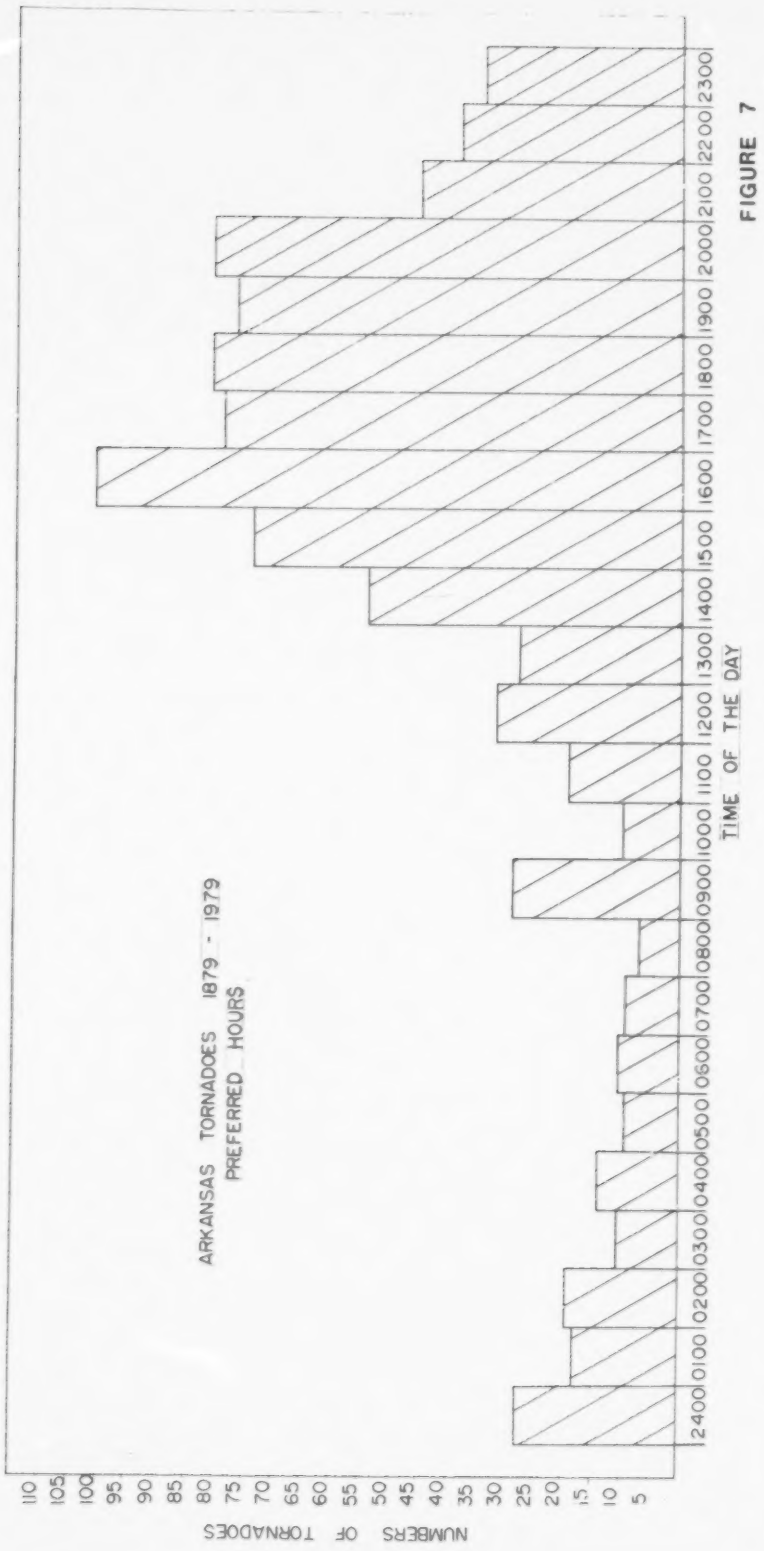

ARKANSAS TORNADOES 1879 - 1979
PREFERRED HOURS
NUMBERS OF TORNADOES
110 105 100 95 90 85 80 75 70 65 60 55 50 45 40 35 30 25 20 15 10 5
2400 0100 0200 0300 0400 0500 0600 0700 0800 0900 1000 1100 1200 1300 1400 1500 1600 1700 1800 1900 2000 2100 2200 2300
TIME OF THE DAY

FIGURE 7

to substantiate the existence of alleys and shunted areas oftornado occurrence in Arkansas. The position of the mean synoptic scale storm track over the state in the spring period may favor strong cumulonimbus cloud development and subsequent tornadoes. Three areas within the state have a high frequency of tornado occurrence: 1) the northwest region of the state associated with the Springfield Plateau, 2) the boundary area between the Ozark and Ouachita Uplands and the Gulf Coastal Plain and Mississippi Embayment, and 3) the Arkansas River Valley. Each of these regions has relatively low local relief. The shunted areas of the state are associated with areas of high local relief in the Ozark and Ouachita Uplands. Because tornadoes are the most violent of all atmospheric storms, Arkansans living in the alley regions of the state should be particularly aware of the tendency for tornadoes to occur in these low relief regions particularly during the spring period.

---

[1]Harry S. Cole, 1927, "Tornadoes in Arkansas." *Monthly Weather Review.* 55:176-182.

[2]M.O. Asp, 1956. "Geographical Distribution of Tornadoes in Arkansas." *Monthly Weather Review.* 84:143-145.

[3]Robert G. Gallimore, Jr., 1968. *Topographic Influence on Tornado Tracks and Frequencies in Arkansas and Wisconsin.* M.S. Thesis. University of Wisconsin, Madison, Wisconsin. 73 p.

[4]A.T. Safford, 1970. *The Influence of Terrain on the Frequency, Distribution of Tornado and Hail Occurrence in the Central Midwest.* M.S. Thesis. St. Louis University, St. Louis, Missouri.

[5]Randolph J. Dohne, 1981. *Thunderstorm Intensities and Trajectories Over the Ozark Plateau Region.* M.A. Thesis. University of Arkansas, Fayetteville, Arkansas. 86 p.

[6]John R. Borchert, 1950. "The Climate of the Central North American Grassland."*Annals,* Association of American Geographers. 40:1-39.

[7]Reid A. Bryson, 1966. "Air Masses, Streamlines, and the Boreal Forest."*Geographical Bulletin.* 8:228-269.

ONE MORE EFFECT OF THE ARKANSAS USURY LAW

Richard K. Ford
Assistant Professor of Economics
University of Arkansas at Little Rock

Sylvia Borchert
Honor Student in Finance
University of Arkansas at Little Rock

An article written by Joseph W. Wilson and E. Cameron Williams in the Fall 1981 issue of the *Arkansas Business and Economic Review* was titled with the question "Are Arkansas Consumers Being Denied Credit Because of the Usury Ceiling?" The conclusion of their article was: No, Arkansas consumers did not perceive themselves to be affected by the 10 percent usury limit in obtaining desired consumer goods on credit. The Wilson and Williams work was undertaken last year and, in their study, included automobile loans as one category of consumer goods purchased on credit. At that particular time, a major type of loan being processed at the 10 percent rate of interest was the automobile loan. However, since Wilson and Williams published their article, a major change in loan policy has occurred within the automotive credit industry. In November 1981 the American automobile credit companies decided to list the automobile dealers as the lienholders, rather than their listing themselves as had been customary until that time. The effect of this change is to place direct responsibility on the dealer for repossession of the automobile if the loan account becomes past due. The lienholder status also requires the dealer to pay the balance of the loan to the credit company once the loan is determined to be delinquent. Both of these consequences increase the dealer's cost of doing business.

When the change was initiated by the credit companies, it was made clear by one of them that it was as a direct result of Arkansas' usury law, which made operations in this state unprofitable. Moreover, all three of the finance companies stated that the 10 percent interest ceiling put pressure on them to undertake these measures to reduce their losses on automobile loans made in Arkansas. This change is completely rational and predictable when considering the components of the nominal rate of interest.

Economic theory suggests that the nominal rate of interest (i.e the rate charged) can be subdivided into two parts: 1) the inflation element and 2) the real interest rate element. The real interest rate element can be further subdivided into a risk component and a time-value-of-money component. Conceptually, the three component parts—risk, inflation and the time value of money—add up to equal the nominal rate of interest. The risk and inflation components of the interest payments will be accounted for first since they can be considered costs of doing business. This is similar to the production process where the owner must pay for the labor and the cost of materials from his revenues before he has a return for himself. Therefore, the time-value-of-money component will be the last portion to be subtracted from the interest payments.

Whenever the market nominal rate of interest is above a government imposed ceiling, the level of interest payments will decrease thereby reducing the size of the time-value-of-money component.[1]. Assuming the automobile credit companies do continue to finance cars in Arkansas without requiring "points",[2] they have only two options: 1) to accept a lower return for their services, or 2) to lower their cost of doing business. They will obviously choose the option that will maximize their returns. That is, they will lower their business costs which basically consist of the inflation and risk components of the nominal interest rate. Since the inflation rate is beyond their control, they will attempt to lower the risk component of the interest rate.

In Arkansas, the national automobile credit companies have chosen to reduce the risk component in that they have changed the conditions under which they are willing to loan money. Risk has not been eliminated, it has merely been shifted downward. The dealers now bear the risk under the newly imposed loan policy changes instituted by the credit companies.

Given that the national automobile credit companies will be willing to engage in automobile loans under the new conditions, it seems logical to ask whether the other two parties in the loan agreement will also be willing. That is, will the dealers and the consumers agree to the new rules? In order to answer these questions, each will be addressed separately by applying economic logic to the participants' positions in an endeavor to predict their responses to the November change. It should be noted here that in order for a loan to be consummated under the new rules, all three parties must be in agreement, i.e., the credit companies, the dealers, and the consumers. Unlike the democratic process, two thirds of the votes are insufficient for an agreement. The market requires complete agreement for economic activity to proceed.

Unlike the larger corporations which are able to spread the risk of default over a broader spectrum of consumers including those from states without a usury law, the Arkansas dealers are not equipped to meet this new challenge. They are primarily in the automobile sales business and not in the financing business and they may lack both the expertise and the financial risk capital to enter into this new market. The new rules require the Arkansas automobile dealers to "guarantee" loans under the 10 percent usury law and those dealers will undoubtedly try to limit the risk component to a bare minimum. One way for this to be accomplished is to establish higher standards for consumers in order to qualify for a loan. Loans may be scrutinized under much harsher criteria. Financial ability and timeliness of payment history, among others, may command more of the dealers' attention, thus reducing the potential for defaults and effectively minimizing the risk.

The consumer purchasing an automobile on credit has little cause to change his behavior based on the November 1981 change of rules. That is, the consumer is not necessarily aware of the fact that the dealer is now the lienholder. From the Arkansas consumer's point of view, he is still asking for a loan at a below market rate of interest and he probably has little reason to concern himself with the person or party that guarantees his loan. Considering the three parties in this loan process, two of them would be as willing as before to negotiate a loan under the usury law limit. However, the dealer has now been placed in a position in which he finds it to his self-interest to decrease the number of loans made as opposed to before the rule change. Therefore, the authors pre-

dict that fewer Arkansans will have access to 10 percent automobile financing.

The question that should now be addressed is what effect this reduction of loanable funds at the 10 percent rate will do to the consumers perception of the usury law. It must be assumed that Arkansans feel the usury law is to their benefit since they continue to retain it within the constitutional framework. Also, according to the article by Wilson and Williams, the perception by the Arkansas consumer is that he is not being denied credit to purchase various items. However, as has been noted, since their article was published, a major change has occurred in the Arkansas market for loanable funds at the 10 percent rate. As the individual Arkansan attempts to negotiate automobile loans at the 10 percent rate he will be faced with a higher probability of his not receiving the loan. If he is denied credit, he can rationalize it in one of two ways: either 1) the usury law limited his access to loanable funds, or 2) other conditions, such as the depressed economy, restricted his access to those funds.

If the credit shopper rationalizes his unacceptability to obtain credit as a result of depressed economic conditions, then the results reported by Wilson and Williams will continue to be valid. Therefore, the economic experiences of the Arkansas consumers would not be expected to influence the opinions of the Arkansas voters. On the other hand, if the credit shopper rationalizes his unacceptability in obtaining credit as a result of the usury law, then different results can be predicted. For one, the reported results of Wilson and Williams will no longer hold true in the future and it can be predicted that the voters will have their political opinions influenced by the results of the market place.

---

[1]Currently GMAC is advertising 12.8 percent financing nationally except where in conflict with state usury laws. This can be considered a proxy for a market nominal rate of interest. Arkansas is one of the few states with an effective usury law which limits chargeable interest to 10 percent.

[2]It is conceivable that the finance companies could require an initial lump sum payment for the privilege of extending credit. This is similar to the "points" paid in the real estate market.

ECONOMIC EFFICIENCY VS. EQUITY: THE PENDULUM SWINGS

Thomas R. McKinnon
Director, Bessie B. Moore Center
for Economic Education
University of Arkansas, Fayetteville

Americans today have become aware, perhaps as never before, of conflicting goals as we try to formulate public policy. Policies to cure inflation throw us into a recession. Policies to improve economic security retard economic growth. Economic justice is often achieved at the expense of economic freedom. The resulting dilemma need not be reason for despair, but it does make policy formation difficult. We have to recognize the conflict and carefully consider the trade-offs involved.

Among the conflict and trade-off problems that have far reaching significance but have received little attention is the conflict between economic efficiency and an equitable distribution of income. Economic efficiency is the situation in which loss in production, distribution and consumption are minimized so that we achieve maximum output from limited input. This is the answer to the basic economic problem and the underlying purpose of all economic systems. Through the forces of self-interest and competition, the market system is said to achieve economic efficiency. The profit motive and the struggle to survive in the market place are strong motivations to eliminate waste.

An equitable distribution of income equity is more difficult to define. Philosophers for five thousand years have unsuccessfully attempted a definition of equity. Generally, we recognize that it refers to fairness or equal treatment for equals. Equity is not synonymous with equality which might constitute equal treatment of unequals. To overcome the difficulty of defining equity, we go to practice: the most prevalent practical policies rationalized on the basis of equity are those aimed at redistributing income downward. Examples of equity promoting policies include civil rights legislation such as the Fair Employment Act of 1964, the graduated income tax, welfare programs such as aid for Families with dependent children, and social security. There is considerable evidence that equity is an important goal.

The goals of equity and efficiency sometimes conflict and some of our recent policy difficulties have resulted from our failure to recognize the conflicts. An example is the recent controversy over energy policy. Some policy-makers favored a price ceiling and rationing to conserve oil and keep the price low. Other policy-makers favored removing all price controls and pointed out that as the price rises, consumers will cut back consumption voluntarily and at the same time producers will expand production.

With efficiency as the primary consideration, the second policy is clearly superior. Oil will be rationed to uses that will yield the highest price, waste will be minimized, and exploration and production will become more rewarding. The private market is the solution. However, if economic justice is given top priority, the second solution is less satisfactory. Lower income people, the rural poor, less densely settled areas will be priced out of the market and only higher income groups will be able to afford gasoline.

Obviously, producers must have profit to continue production, but it is questionable if they needed the prices made possible by OPEC.

The better solution depended on the goal priority but without clarification of goals, each side was convinced that its solution was better. Had we examined our goals, clearer thinking may have prevailed.

The emphasis on equity and efficiency was changed over time. Classical economics put primary emphasis on efficiency rather than equity. In his well known example of a pen factory, Adam Smith pointed out that specialization and division of labor are the sources of economic progress as they increase economic efficiency.[1] David Ricardo, J.B. Say, Nassau Senior and other classical economists developed the theory of a market system in which private forces unhampered by government would achieve greater degrees of efficiency. The later Marginalists developed a theory of distribution in which each productive resource was paid according to the value of its marginal product. The system would promote efficiency but individuals with no, or meager, productive resources received little or no income. Perhaps the epitome of the efficiency emphasis was achieved in the writings the Social Darwinists and their application of "survival of the fittest" to human society.

Among the outcomes of the traumatic experience of the Great Depression of the 1930's was a strong emphasis on economic justice or downward redistribution of income. The New Deal programs promoting social security, labor unions, minimum wage, farm subsidies, welfare payments, FDIC, and even the NRA were somewhat vaguely based on a concept of economic justice. John Maynard Keynes, the economist most closely identified with New Deal policies even though he had nothing to do with them, laid the theoretical foundation for emphasis on equity. In summary, Keynes theorized that aggregate demand is the most important determinant of output, employment and income. As aggregate demand increases up to full employment, output, employment, and income will increase for all segments of society. The largest component of aggregate demand is consumption and its magnitude depends on the marginal propensity to consume (MPC). Since MPC is greater at lower levels on income,[2] policies that enhance income of lower income groups, increase aggregate demand.

As long as a society is striving to promote full employment, redistribution of income to lower income groups is compatible, even desirable. However, when resource depletion, low productivity, and inflation become of primary concern, downward redistribution must be re-evaluated.

The so-called "supply-side" policies of the current administration represent a return to classical or neo-classical economics in several ways, and to the point of our discussion, a reemphasis of the goal of efficiency over equity. Tax cuts that primarily impact upper income groups, and spending cuts that mainly affect social programs are rationalized on the basis of promoting economic efficiency.

Demand management policies, in use for almost fifty years, were especially well suited to redistribution of income to lower income groups but may have had damaging effects on economic efficiency. Supply-side policies are designed to increase saving and capital formation and promote increased productivity thereby improving efficiency but will do little for the welfare of the disadvantaged.

We have seen the emphasis on efficiency of the classical and neo-classical period eclipsed by equity in the 1930's

only to be reemphasized in the 1980's. By recognizing this changing emphasis and understanding that others may have different valuation of goals, we will better be able to have intelligent dialogue as we meet the difficult economic problems of the '80's.

[1]Adam Smith, *The Wealth of Nations*, The Modern Library, Random House, 1937, p.4-5.

[2]John Maynard Keynes, *The General Theory of Employment, Interest, and Money*, Harcourt, Brace and World, Inc., A Harbinger Book, 1964, pp. 97, 105.

SELECTED ARKANSAS AND U.S. ECONOMIC INDICATORS

Arkansas Economy: Q-IV, 1981 and the Year 29

Index of Total Employment, Arkansas and United States 30

Index of Personal Income, Arkansas and United States 31

Index of Value Added by Manufacture, Arkansas, and Index of Manufacturing Production, United States 32

Index of Cash Receipts from Farm Marketing, Arkansas and United States 33

Indexes of Activity of Arkansas Savings and Loan Associations 34

Waterborne Commerce McClellan-Kerr Arkansas Navigation System 35

Index of Residential Construction Contracts, Arkansas and United States 36

Index of Nonresidential Construction Contracts, Arkansas and United States 37

Labor Force Estimates February 1982 38

Consumer Prices 40

ARKANSAS ECONOMY: Q-IV, 1981

Phillip H. Taylor
Director, Bureau of Business and Economic Research
University of Arkansas, Fayetteville

The downturn in Arkansas Personal Income in the fourth quarter marks one of the few times this series has shown a quarter-to-quarter decline on a seasonally adjusted basis. Largely because of growth registered early in the year, however, the annual total for Personal Income in 1981 was 12.5 percent above that of 1980.

While the unemployment rate remained well above the national average throughout the year, the labor force and total employment continued to expand. Although shortened work weeks and the fact that many new jobs may be part-time dam\ ıed the positive impact derived from the increased employment, the larger number of employed did mitigate somewhat the economic consequences of the greater unemployment level.

Value added by manufacture generally drifted downward during the year. The estimate for 1981 is substantially above 1980 but this may be due to the methodology employed in deriving this data series. In any event, the level of manufacturing activity in the fourth quarter, if continued through 1982, implies an annual decline of 4.7 percent.

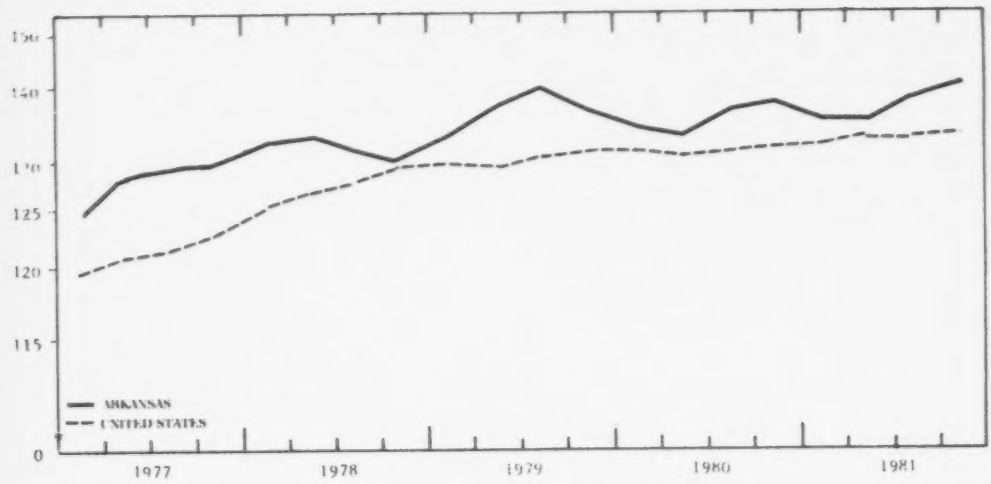
Cash receipts from farm marketings totaled less than $3.5 billion for 1981. On a year-to-year basis, this number represents a 12.7 percent drop. Comparing the fourth quarter of 1981 to the same quarter a year earlier, cash receipts fell by 29.4 percent.

The total for residential construction contracts in 1981 was the lowest since 1976. Moreover, while nonresidential construction contracts grew between the third and fourth quarters, total activity for the year was 20.9 percent below the peak achieved in 1979. Both new loans and net new savings reported by savings and loan associations improved somewhat toward the close of the year but continued to remain below levels attained in any recent year.

The condition of the Arkansas economy in the closing quarter of 1981 appears to be reasonably representative of what has since occured in early 1982 and, in general, the outlook for the entirety of 1982. As of May, the recession may have bottomed but there is no obvious catalytic factor on the immediate horizon that could be assumed to be a significant stimulus to the economy. Consequently, the outlook for economic activity is for a horizontal performance with little further change until near the end of the year. At that point, both interest rates and expectations concerning future levels of inflation may well have declined to a point sufficient to provide the impetus for the introduction of a significant rate of recovery.

INDEX OF TOTAL EMPLOYMENT, ARKANSAS AND UNITED STATES

Quarterly data, seasonally adjusted, 1967 - 1981



(Semi-logarithmic scale: equal slopes indicate equal rates of change)

Base Year to Date and Quarterly Changes in Total Employment

Seasonally adjusted, percent

	1967 to 1981 Q-IV	1980 Q-IV to 1981 Q-I	1981 Q-I to 1981 Q-II	1981 Q-II to 1981 Q-III	1981 Q-III to 1981 Q-IV
Arkansas	+ 41.8	- 2.0	+ 0.3	+ 2.7	+ 1.7
United States	+ 34.5	+ 0.8	+ 0.4[R]	- 0.1	- 0.6

EMPLOYMENT BY MAJOR INDUSTRY GROUP IN ARKANSAS, AND UNEMPLOYMENT RATE, ARKANSAS AND UNITED STATES

Seasonally adjusted

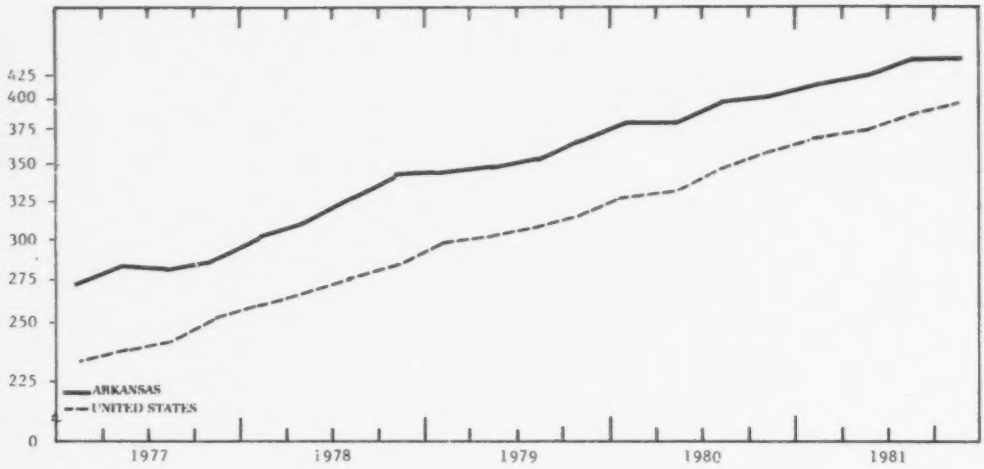
TIME PERIOD	EMPLOYMENT				UNEMPLOYMENT RATE	
	Wage and Salary		Agricultural	Total	Arkansas	United States
	Manufacturing	Nonmanufacturing				
1974	201,300	432,200	56,700	786,800	5.0	5.6
1975	175,500	444,500	61,000	776,700	8.9	8.5
1976	187,300	445,100	65,600	794,000	6.2	7.7
1977	208,900	483,400	62,800	837,700	6.0	7.0
1978	216,500	507,350	61,250	868,400	6.4	6.0
1979	217,750	526,700	65,800	904,000	6.3	5.8
1980	210,050	540,400	65,100	896,200	7.4*	7.2
1981	212,100	536,150	64,100	910,150	8.6*	7.6
Q-I	210,100	537,250	63,300	892,420	9.1*	7.3
Q-II	212,950	537,050	64,350	894,840	7.9*	7.4
Q-III	214,400	534,550	64,550	918,730	8.2*	7.2
Q-IV	210,860	535,840	64,160	934,670	9.1*	8.4

[R]Revised based on data presented in BEA Survey of Current Business, February 1982.

*Actual Rate. Effective January 1977 the Arkansas Employment Security Division revised its adjustments to employment data based on methods developed by the U.S. Bureau of Labor Statistics. As a result, the Arkansas unemployment rate cannot be seasonally adjusted at this time.

INDEX OF PERSONAL INCOME, ARKANSAS AND UNITED STATES

Quarterly data, seasonally adjusted, 1967 = 100



(Semi-logarithmic scale: equal slopes indicate equal rates of change)

Base Year to Date and Quarterly Changes in Personal Income

Seasonally adjusted, percent

	1967 to 1981 Q-IV	1980 Q-IV to 1981 Q-I	1981 Q-I to 1981 Q-II	1981 Q-II to 1981 Q-III	1981 Q-III to 1981 Q-IV
Arkansas	+ 345.9	+ 4.5[R]	+ 2.5[R]	+ 3.7[R]	- 0.1
United States	+ 296.1	+ 3.1[R]	+ 2.1	+ 3.1	+ 1.8

PERSONAL INCOME IN ARKANSAS

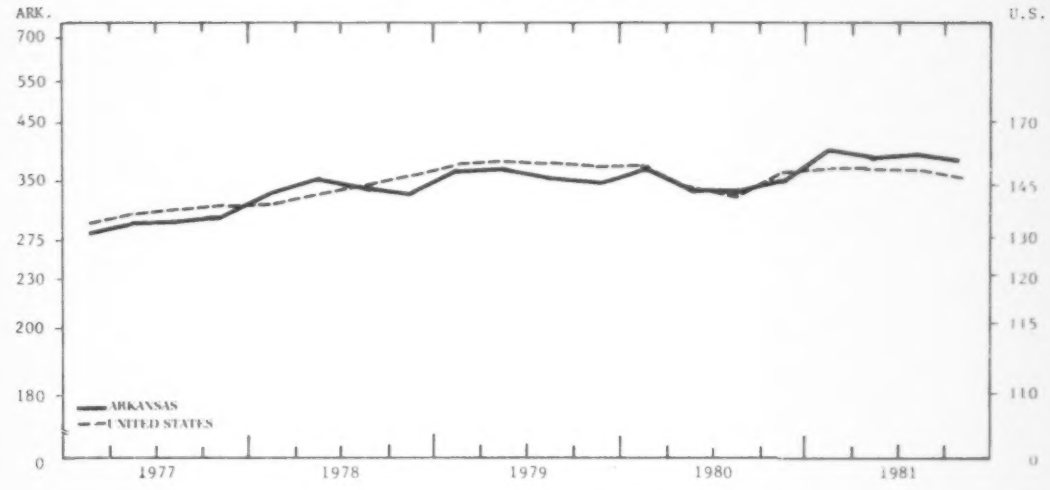
Millions of dollars, seasonally adjusted

Quarter	1974	1975	1976	1977	1978	1979	1980	1981
Jan-Mar	2,142	2,070	2,508	2,837	3,118	3,698	4,002	4,451[R]
Apr-Jun	2,242	2,373	2,667	2,948	3,208	3,681	4,975	4,560[R]
Jul-Sep	2,213	2,391	2,626	2,984	3,315	3,805	4,160	4,727[R]
Oct-Dec	2,234	2,368	2,676	3,070	3,406	3,929	4,265	4,722
Annual	8,831	9,202	10,477	11,839	13,047	15,113	17,402	18,460

[R]Revised on the basis of BEA report of April 1982.

INDEX OF VALUE ADDED BY MANUFACTURE, ARKANSAS, AND INDEX OF MANUFACTURING PRODUCTION, UNITED STATES

Quarterly data, seasonally adjusted, 1967 = 100



(Semi-logarithmic scale: equal slopes indicate equal rates of change)

Base Year to Date and Quarterly Changes in Manufacturing

Seasonally adjusted, percent

	1967 to 1981 Q-IV	1980 Q-IV to 1981 Q-I	1981 Q-I to 1981 Q-II	1981 Q-II to 1981 Q-III	1981 Q-III to 1981 Q-IV
Arkansas	+ 350.7	+ 11.0	- 1.8	+ 1.1	- 4.3
United States	+ 46.2	+ 2.1	+ 0.5[R]	- 0.7[R]	- 3.5

VALUE ADDED BY MANUFACTURE IN ARKANSAS

Millions of dollars

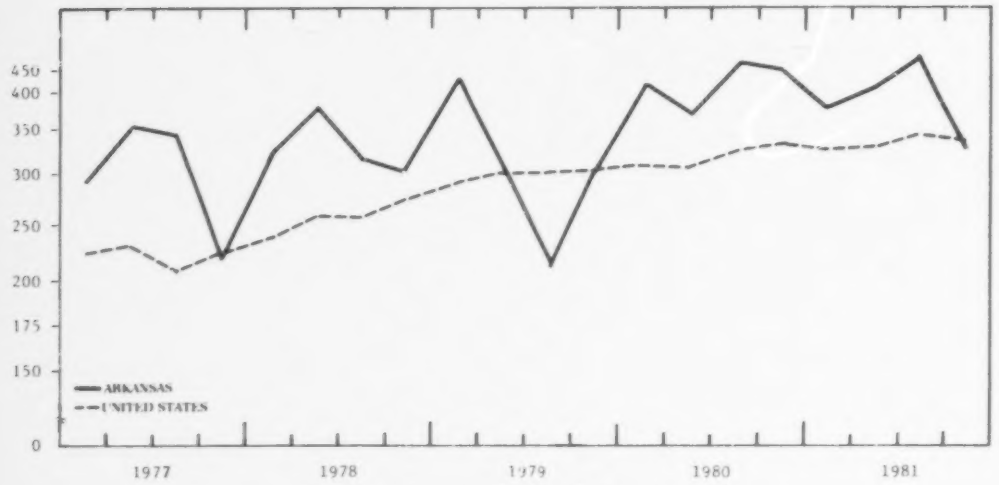
	Seasonally adjusted								Not seasonally adjusted
Quarter	1974[R]	1975[R]	1976[R]	1977[R]	1978[R]	1979[R]	1980[R]	1981[R]	1981[R]
Jan-Mar	911.4	981.0	1,099.3	1,158.2	1,326.7	1,416.1	1,435.8	1,534.0	1,396.0
Apr-Jun	926.7	975.4	1,103.2	1,226.4	1,377.1	1,407.8	1,328.3	1,506.7	1,476.5
Jul-Sep	914.8	1,009.3	1,134.7	1,234.1	1,344.0	1,369.4	1,325.2	1,523.6	1,645.5
Oct-Dec	878.1	1,074.1	1,103.1	1,248.6	1,325.7	1,362.1	1,374.7	1,458.0	1,501.8
Annual	3,631.0	4,039.8	4,440.3	4,867.3	5,373.5	5,555.4	5,464.0	6,122.3	

[R]All quarters revised on the basis on recomputation of regression equation for estimating value added.

INDEX OF CASH RECEIPTS FROM FARM MARKETINGS

ARKANSAS AND UNITED STATES

Quarterly data, seasonally adjusted 1967 = 100



(Semi-logarithmic scale; equal slopes indicate equal rates of change)

Base Year to Date and Quarterly Changes in Cash Receipts

Seasonally adjusted, percent

	1967 to 1981 Q-IV	1980 Q-IV to 1980 Q-I	1981 Q-I to 1981 Q-II	1981 Q-II to 1981 Q-III	1981 Q-III to 1981 Q-IV
Arkansas	+ 218.7	- 13.9	+ 3.9	+ 17.0[R]	- 24.4
United States	+ 229.2	- 2.7	+ 1.1	- 0.3	- 2.2

CASH RECEIPTS FROM FARM MARKETINGS

IN ARKANSAS

Thousands of dollars

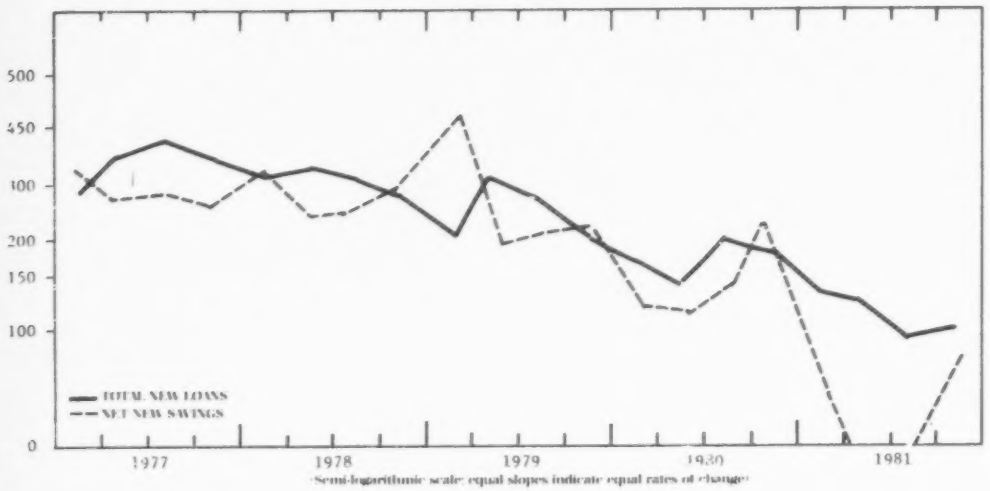
	Seasonally adjusted								Not seasonally adjusted
Quarter	1974	1975	1976	1977	1978	1979	1980	1981	1981
Jan-Mar	718,418	529,492	565,575	686,105	790,387	1,038,085	989,950	900,077	662,150
Apr-Jun	705,678	584,346	740,954	703,457	899,118	532,344	861,500	834,900[R]	644,082[R]
Jul-Sep	568,678	609,324	621,624	578,357	721,275	835,030	1,054,950	976,620[R]	767,981[R]
Oct-Dec	618,796	508,651	497,214	500,169	601,443	704,385	1,044,850	738,271	1,259,895
Annual	2,611,570	2,231,813	2,425,367	2,468,088	3,012,223	3,231,844	3,951,250	3,449,868	

[R]Revised based on Department of Agriculture, "1981 Summary Report of Cash Receipts from Farm Marketings."

INDEXES OF ACTIVITY OF ARKANSAS SAVINGS AND LOAN ASSOCIATIONS

TOTAL NEW LOANS AND NET NEW SAVINGS

Quarterly data, not seasonally adjusted 1967 = 100



Semi-logarithmic scale: equal slopes indicate equal rates of change

Base Year to Date and Quarterly Changes in Activity of Arkansas S & L Associations

Not seasonally adjusted, percent

	1967 to 1981 Q-III	1980 Q-IV to 1980 Q-I	1981 Q-I to 1981 Q-II	1981 Q-II to 1981 Q-III	1981 Q-III to 1981 Q-IV
Total New Loans	- 3.1	- 24.2	- 5.6	- 24.3	+ 2.3
Net New Savings	- 28.1	- 81.3	+ 191.6	+ 6.6	+ 289.9

ECONOMIC ACTIVITY OF

ARKANSAS SAVINGS AND LOAN ASSOCIATIONS

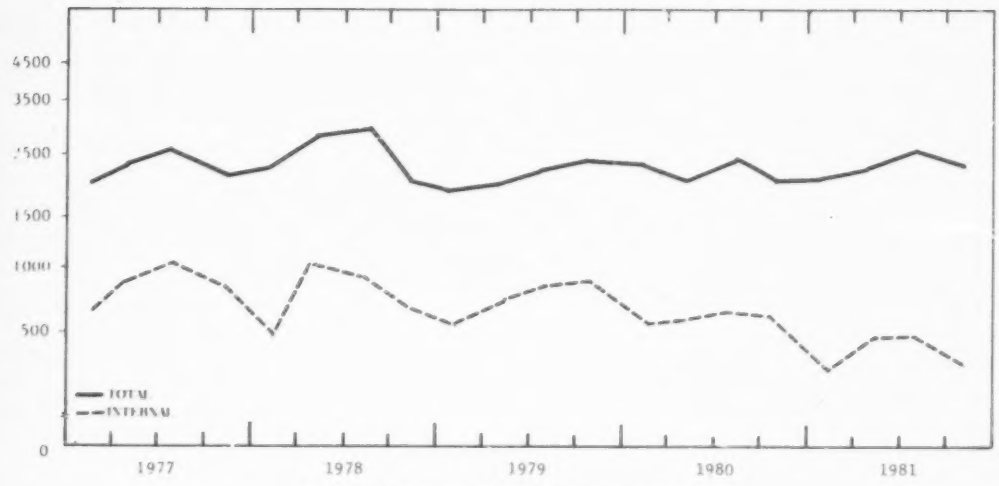
Thousands of dollars

TIME PERIOD	TOTAL NEW LOANS		NET NEW SAVINGS	
	Current $	1967 $	Current $	1967 $
1974	300,152	203,915	188,400	123,872
1975	413,366	255,678	309,304	192,119
1976	606,400	355,280	393,300	231,050
1977	815,800	448,590	405,000	223,492
1978	729,300	373,700	416,900	213,610
1979	625,900	290,560	436,830	204,525
1980	504,700	204,275	287,600	115,580
1981	360,800	132,970	20,000	7,240
Q-I	103,100	39,220	22,300	8,480
Q-II	99,600	37,030	- 20,900	- 7,770
Q-III	77,600	28,040	- 20,100	- 7,260
Q-IV	80,500	28,680	38,700	13,790

WATERBORNE COMMERCE

McCLELLAN-KERR ARKANSAS RIVER NAVIGATION SYSTEM

Quarterly data in thousands of short tons, not seasonally adjusted



(Semi-logarithmic scale: equal slopes indicate equal rates of change)

Base Year to Date and Quarterly Changes in Total and Internal Tonnages

Not seasonally adjusted, percent
Base: 3rd Qtr. 1971

	1971 to 1981 Q-IV	1980 Q-IV to 1981 Q-I	1981 Q-I to 1981 Q-II	1981 Q-II to 1981 Q-III	1981 Q-III to 1981 Q-IV
Total	+ 159.1	+ 1.1	+ 10.6	+ 10.2	- 9.1
Internal	- 35.4	- 36.6	+ 16.9	+ 7.4	- 20.9

FREIGHT TRAFFIC

ARKANSAS RIVER COMMERCE

Thousands of short tons, not seasonally adjusted

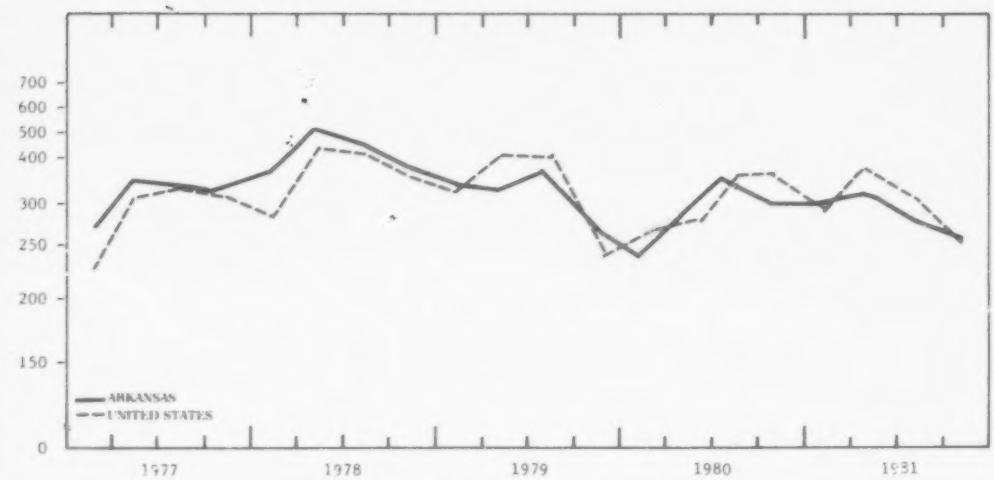
TIME PERIOD	TRAFFIC TONNAGES*			
	INBOUND	OUTBOUND	INTERNAL	TOTAL
1974	1,950	775	2,959	6,060
1975	1,440	870	2,465	5,204
1976	1,988	1,663	3,033	7,078
1977	2,841	2,339	3,463	9,138
1978	2,595	3,899	3,170	10,216
1979	2,026	3,456	2,932	8,926
1980	1,611	4,643	2,408	9,133
1981	1,564	5,684	1,741	9,446
Q-I	343	1,220	394	2,131
Q-II	372	1,399	461	2,357
Q-III	440	1,594	495	2,597
Q-IV	409	1,471	391	2,361

*Total tonnage includes "through traffic"--shipments which originate and terminate outside the Arkansas River Commerce Area.

INDEX OF RESIDENTIAL CONSTRUCTION CONTRACTS

ARKANSAS AND UNITED STATES

Quarterly data, not seasonally adjusted 1967 = 100



(Semi-logarithmic scale; equal slopes indicate equal rates of change)

Base Year to Date and Quarterly Changes in Residential Construction

Not seasonally adjusted, percent

	1967 to 1981 Q-IV	1980 Q-IV to 1981 Q-I	1981 Q-I to 1981 Q-II	1981 Q-II to 1981 Q-III	1981 Q-III to 1981 Q-IV
Arkansas	+ 158.7	- 1.5	+ 9.7	- 15.1	- 7.6
United States	+ 150.8	- 21.2	+ 28.0	- 15.1	- 20.8

RESIDENTIAL CONSTRUCTION CONTRACTS

IN ARKANSAS

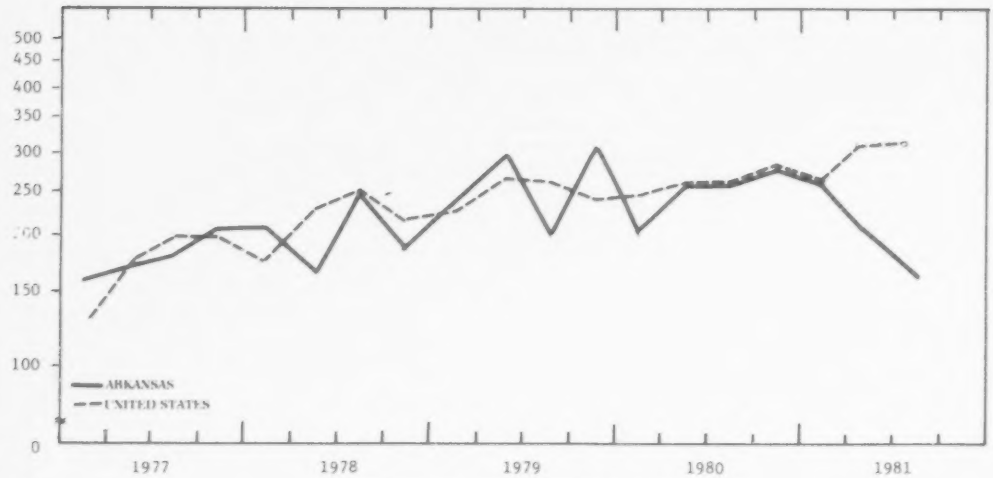
Thousands of dollars

	Seasonally adjusted								Not seasonally adjusted
Quarter	1974	1975	1976	1977	1978	1979	1980	1981	1981
Jan-Mar	93,249	84,488	116,379	160,861	220,739	205,119	144,050	176,180	161,900
Apr-Jun	94,963	85,740	117,164	173,558	236,915	153,917	137,600	159,750	177,600
Jul-Sep	94,214	98,557	122,732	182,210	227,633	193,364	177,450	138,360	150,800
Oct-Dec	82,505	104,656	134,927	217,222	236,718	154,130	185,450	158,510	139,400
Annual	354,931	373,441	491,202	733,851	922,005	706,530	664,550	632,800	

INDEX OF NONRESIDENTIAL CONSTRUCTION CONTRACTS

ARKANSAS AND UNITED STATES

Quarterly data, not seasonally adjusted 1967 = 100



(Semi-logarithmic scale: equal slopes indicate equal rates of change)

Base Year to Date and Quarterly Changes in Nonresidential Construction Contracts

Not seasonally adjusted, percent

	1967 to 1981 Q-IV	1980 Q-IV to 1981 Q-I	1981 Q-I to 1981 Q-II	1981 Q-II to 1981 Q-III	1981 Q-III to 1981 Q-IV
Arkansas	+ 120.7	- 9.2	- 19.7	- 18.3	+ 33.8
United States	+ 176.5	- 8.1	+ 17.2	+ 0.5	- 11.6

NONRESIDENTAL CONSTRUCTION CONTRACTS

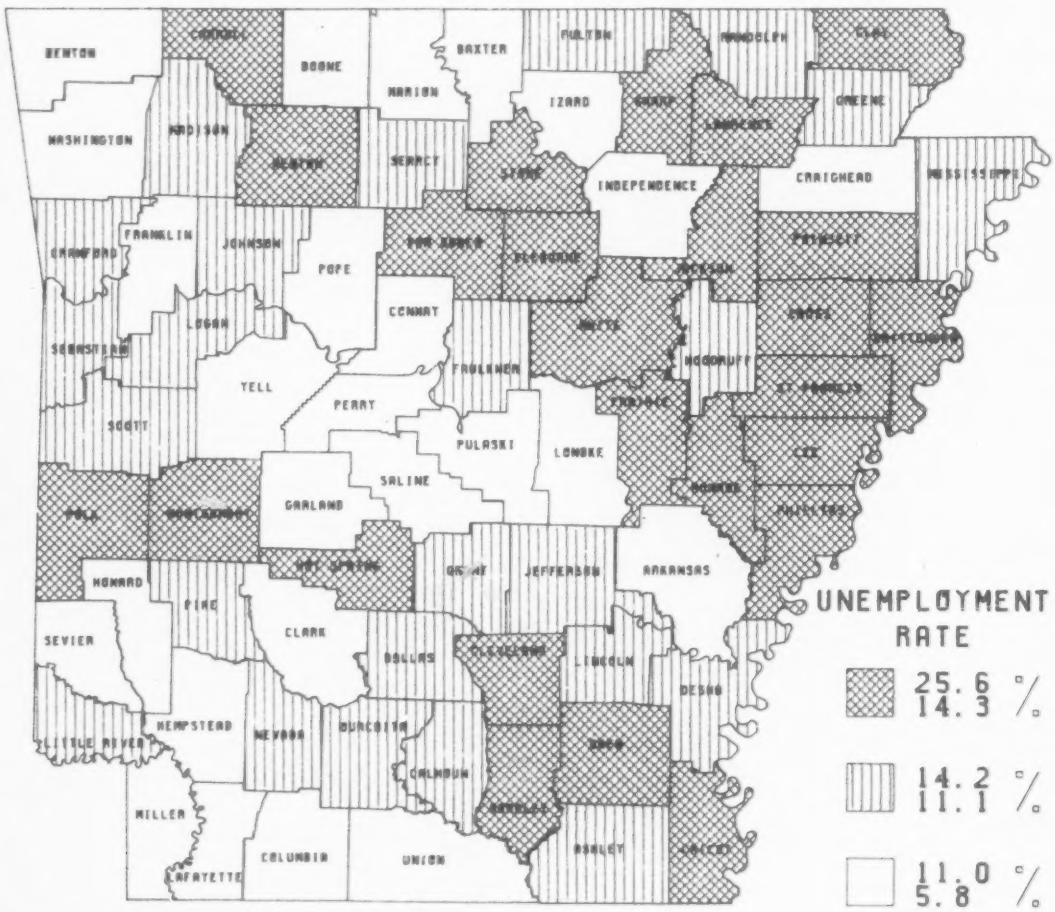
IN ARKANSAS

Thousands of dollars, not seasonally adjusted

Quarter	1974	1975	1976	1977	1978	1979	1980	1981
Jan-Mar	56,094	79,225	43,591	57,486	72,851	88,988	72,300	90,500
Apr-Jun	63,607	67,424	93,906	63,726	60,479	109,976	91,200	72,700
Jul-Sep	106,530	45,566	67,913	67,632	90,471	70,296	91,900	59,400
Oct-Dec	56,247	89,446	79,004	76,866	69,041	112,549	99,700	79,500
Annual	272,478	281,661	284,414	265,710	292,842	381,809	355,100	302,100

LABOR FORCE ESTIMATES
FEBRUARY 1982

IN FEBRUARY, ARKANSAS' CIVILIAN LABOR FORCE GREW BY 1,700 TO TOTAL 1,003,700. TOTAL EMPLOYMENT INCREASED 11,900 TO TOTAL 887,600. UNEMPLOYMENT FELL 10,200 TO TOTAL 116,100. OF THE 75 COUNTIES, HOWARD HAD THE LOWEST UNEMPLOYMENT RATE WITH 5.8 PERCENT AND NEWTON, THE HIGHEST AT 25.6 PERCENT. MOREOVER, THE UNEMPLOYMENT RATES IN 42 COUNTIES EQUALLED OR EXCEEDED THE STATE RATE. FOR THE SMSAS, LITTLE ROCK-NORTH LITTLE ROCK HAD THE LOWEST UNEMPLOYMENT RATE AT 8.6 PERCENT WHILE FORT SMITH HAD THE HIGHEST AT 11.2 PERCENT. THE RATES FOR THE FAYETTEVILLE-SPRINGDALE AND THE PINE BLUFF SMSAS WERE 8.9 AND 11.3 PERCENT, RESPECTIVELY.



UNIVERSITY OF ARKANSAS
COMPUTER GENERATED MAP

LABOR FORCE ESTIMATES
February 1982

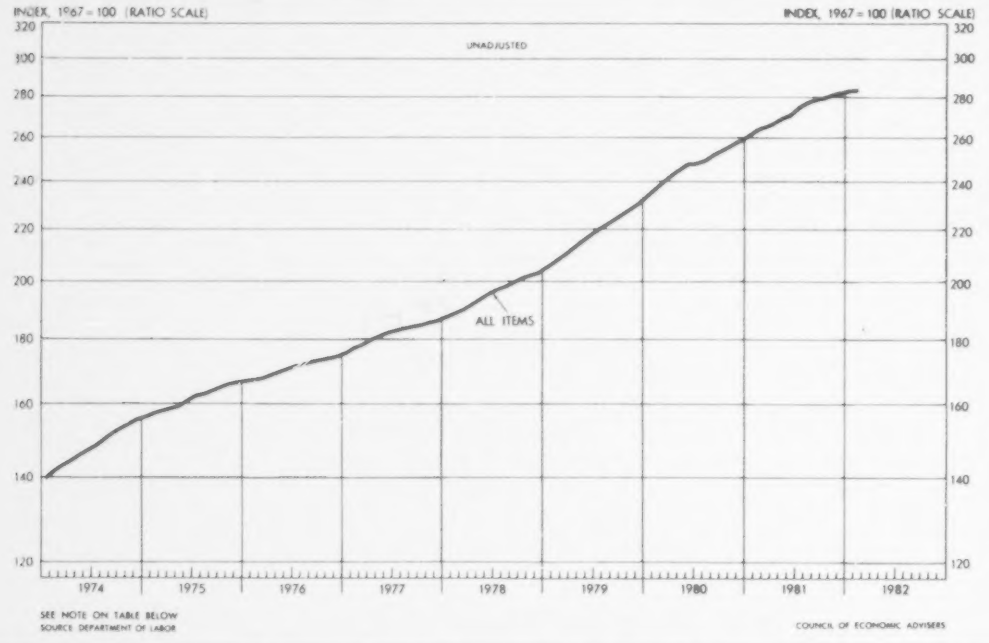
State and SMSA's	Civilian Labor Force	Unemployment Rate	Total Employment
UNITED STATES			
Actual	108,324,000	9.6	97,946,000
STATE OF ARKANSAS	1,003,700	11.6	887,600
Fayetteville-Springdale SMSA (Benton & Washington Counties)	81,350	8.9	74,150
Fort Smith SMSA (Crawford & Sebastian Counties in Arkansas and LeFlore & Sequoyah Counties in Oklahoma)	87,900	11.7	77,600
Little Rock-North Little Rock SMSA (Pulaski & Saline Counties)	192,500	8.6	176,000
Pine Bluff SMSA (Jefferson County)	39,225	11.3	34,775

County	Civilian Labor Force	Unemployment Rate	Total Employment	County	Civilian Labor Force	Unemployment Rate	Total Employment
Arkansas	11,700	9.6	10,575	Lee	5,025	23.4	3,850
Ashley	11,350	13.4	9,825	Lincoln	3,775	13.2	3,275
Baxter	9,350	11.0	8,325	Little River	5,500	11.4	4,875
Benton	35,800	9.0	35,575	Logan	7,250	11.7	6,400
Boone	11,575	7.1	10,750	Lonoke	15,775	8.4	14,450
Bradley	5,200	18.3	4,250	Madison	5,750	11.3	5,100
Calhoun	2,450	11.2	2,175	Marion	5,900	7.2	5,475
Carroll	7,825	15.7	6,600	Miller	14,575	9.3	13,225
Chicot	6,825	14.3	5,850	Mississippi	25,400	14.2	21,800
Clark	10,525	8.8	9,600	Monroe	5,275	16.1	4425
Clay	8,825	15.9	7,425	Montgomery	2,675	16.8	2,225
Cleburne	6,200	14.9	5,275	Nevada	4,100	11.6	3,625
Cleveland	2,100	17.9	1,725	Newton	1,950	25.6	1,450
Columbia	13,950	8.8	12,,725	Ouachita	12,525	13.0	10,900
Conway	8,275	9.1	7,525	Perry	31,00	9.7	2,800
Craighead	29,925	10.1	26,900	Phillips	13,475	16.3	11,275
Crawford	16,850	14.2	14,450	Pike	4,250	14.1	3,650
Crittenden	25,225	16.3	21,125	Poinsett	10,225	14.4	8,750
Cross	8,600	16.6	7,175	Polk	5,975	15.9	5,025
Dallas	4,000	12.5	3,500	Pope	18,225	10.8	16,250
Desha	7,850	13.1	6,825	Prairie	3,250	17.7	2,675
Drew	3,100	15.1	6,875	Pulaski	166,275	8.4	152,350
Faulkner	22,250	11.3	19,725	Randolph	6,650	13.9	5,725
Franklin	6,575	9.5	5,950	St. Francis	13,450	25.1	10,075
Fulton	2,575	12.6	2,250	Saline	26,225	9.8	23,650
Garland	29,725	11.0	26,450	Scott	3,225	14.0	2,775
Grant	4,525	12.7	3,950	Searcy	2,700	11.1	2,400
Greene	13,425	11.5	11,875	Sebastian	42,575	12.7	37,175
Hempstead	10,925	8.9	9,950	Sevier	5,800	9.5	5,250
Hot Spring	10,750	20.9	8,500	Sharp	3,750	16.7	3,125
Howard	7,275	5.8	6,850	Stone	3,200	14.8	2,725
Independence	15,550	10.8	13,875	Union	23,550	7.3	21,825
Izard	3,875	11.0	3,450	Van Buren	4,225	15.4	3,875
Jackson	8,875	20.3	7,075	Washington	45,550	8.7	41,575
Jefferson	39,225	11.3	34,775	White	23,225	15.1	19,725
Johnson	7,950	12.6	6,950	Woodruff	3,975	12.6	3,475
Lafayette	3,425	8.8	3,125	Yell	7,875	9.8	7,100
Lawrence	8,050	15.8	6,775				

Source: The Research and Statistics Section, Arkansas Employment Security Division.

CONSUMER PRICES

In February, the consumer price index for all urban consumers rose 0.2 percent, seasonally adjusted (0.3 percent unadjusted). Food and beverage prices were up 0.6 percent, seasonally adjusted, and energy prices were down 0.8 percent, unadjusted.



[1967 = 100; monthly data seasonally adjusted, except as noted]

Period	All items [1] NSA	Food and beverages	Housing: Total [1]	Housing: Home purchase NSA	Housing: Financing, taxes, and insurance NSA	Apparel and upkeep	Transportation: Total [1]	Transportation: New cars	Transportation: Motor fuel [2]	Medical care	Energy [3] NSA	Services	All items less food, energy, and home purchase and finance [4]
Rel. imp. [5]	*100.0*	*17.5*	*46.0*	*9.6*	*12.9*	*4.6*	*19.3*	*3.5*	*6.0*	*4.9*	*11.1*	*43.2*	*49.8*
1974	147.7	158.7	148.8	142.7	181.1	136.2	137.7	117.5	159.9	150.5	159.7	152.1	138.5
1975	161.2	172.1	164.5	160.3	201.9	142.3	150.6	127.6	170.8	168.6	176.6	166.6	150.5
1976	170.5	177.4	174.6	168.4	212.8	147.6	165.5	135.7	177.9	184.7	189.3	180.4	160.8
1977	181.5	188.0	186.5	179.5	227.2	154.2	177.2	142.9	188.2	202.4	207.3	194.3	170.6
1978	195.4	206.3	202.8	196.7	257.8	159.6	185.5	153.8	196.3	219.4	220.4	210.9	180.9
1979	217.4	228.5	227.6	223.1	308.9	166.6	212.0	166.0	265.6	239.7	275.9	234.2	194.1
1980	246.8	248.0	263.3	254.3	396.0	178.4	249.7	179.3	369.1	265.9	361.1	270.3	211.6
1981	272.4	267.3	293.5	267.7	472.5	186.9	280.0	190.2	410.9	294.5	410.0	305.7	231.6
1981: Feb.	263.2	263.7	281.4	263.0	437.1	184.0	272.6	183.9	415.2	281.5	401.1	290.7	223.7
Mar.	265.1	264.5	282.8	261.1	441.1	184.9	275.3	183.1	424.7	284.0	409.3	293.0	225.1
Apr.	266.8	265.0	284.9	260.7	447.1	185.7	274.5	186.1	413.4	286.6	409.8	296.0	226.8
May	269.0	265.4	288.4	263.0	458.3	185.8	275.8	189.9	410.4	289.2	411.3	299.9	228.4
June	271.3	266.0	291.6	266.6	467.2	186.1	276.9	192.0	406.5	292.0	414.0	303.3	230.3
July	274.4	267.7	296.3	271.4	480.0	187.1	279.7	192.8	404.3	295.9	415.7	308.6	232.6
Aug.	276.5	269.1	299.3	272.6	488.3	188.4	281.4	192.8	404.7	299.4	416.1	312.2	234.4
Sept.	279.3	270.9	303.2	274.5	501.8	189.0	284.6	193.7	408.3	302.0	417.1	316.9	236.5
Oct.	279.9	271.5	303.3	272.5	501.8	189.5	288.2	194.0	414.6	305.0	414.9	318.4	238.3
Nov.	280.7	271.9	304.8	270.2	505.6	189.3	290.8	194.6	418.1	308.3	414.1	321.4	239.8
Dec.	281.5	272.1	305.9	270.5	506.3	189.4	292.5	196.1	420.3	310.5	414.6	322.9	241.4
1982: Jan.	282.5	274.1	306.7	269.3	506.0	189.3	291.9	196.0	413.1	312.9	416.4	324.4	242.5
Feb.	283.4	275.8	307.9	270.4	507.2	190.1	289.9	194.5	403.6	315.0	413.0	325.6	243.4

[1] Includes items not shown separately.
[2] Includes direct pricing of diesel and gasohol beginning September 1981.
[3] Fuel oil, coal, and bottled gas; gas (piped) and electricity; and motor fuel, motor oil, coolant, etc.
[4] Estimated series. Finance includes financing, taxes, and insurance.
[5] Relative importance, December 1198.

NOTE.—NSA indicates data are not seasonally adjusted.

Data beginning 1978 are for all urban consumers; earlier data are for urban wage earners and clerical workers.

Source: Department of Labor, Bureau of Labor Statistics.

Arkansas Business and Economic Review

A Publication of the University of Arkansas

Volume 15, Number 2, 1982

contents

Marketing Plans: Nature, Prerequisites, and Benefits

Popular Perceptions of Financial Institutions and the Usury Question in Arkansas

An Empirical Examination of Turnover: A Comparison of Existing and Terminated Employees' Reasons for Separation

Arkansans and the Usury Law in 1982

Financial Institution Structure and Economic Development in Arkansas

The Growing National Debt: Is It a Cause for Concern

Selected Arkansas and U.S. Economic Indicators

Arkansas Business and Economic Review

B.A. NUGENT
Chancellor, University of Arkansas, Fayetteville
JOHN P. OWEN
Dean, College of Business Administration
PHILLIP H. TAYLOR
Director, Bureau of Business and Economic Research
JOSEPH A. ZIEGLER
Senior Research Associate

HARRY FRENCH
Associate Economist
HELEN MCGREW
Research Assistant
TERESA OSBORNE
Research Assistant

WILLIAM FLYNN
Office Manager
SHERRYL E. LAUBACH
Assistant to Editor
PATTI TEASDALE
Bureau Secretary
QUINTON GEANS
Office Assistant

The *Arkansas Business and Economic Review* is published quarterly by the College of Business Administration as a public service and mailed on request without charge to addresses in the U.S. The articles published do not necessarily represent points of view of the Editor or the University.

The College of Business Administration is fully accredited by the American Assembly of Collegiate Schools of Business. The Bureau of Business and Economic Research is a member of the Association for University Business and Economic Research and The Travel Research Association.

The cover design was created by Printing Services, University of Arkansas.

Reprints of *Review* articles are available from the Bureau at a rate of $1.00 for the first copy and 50 cents for each additional copy.

NOTICE

Individuals wishing to be added to the mailing list should send name, address and zip code to the Bureau of Business and Economic Research. If you are moving and wish to continue to receive the *Arkansas Business and Economic Review*, please send us the address label and your new address.

TABLE OF CONTENTS

VOLUME 15 Number 2 1982

PAGE

Marketing Plans: Nature, Prerequisites, and Benefits 1

C.A. Maile
Associate Professor of Marketing
Northern Illinois University

Popular Perceptions of Financial Institutions and the Usury Question in Arkansas 8

Charles R. Britton
Professor of Economics
University of Arkansas, Fayetteville
Robert L. Savage
Professor of Political Science
University of Arkansas, Fayetteville

An Empirical Examination of Turnover: A Comparison of Existing and Terminated Employees' Reasons for Separation 15

Peter M. Ginter
Associate Professor of Management
University of Arkansas, Fayetteville
Thomas W. Jones
Associate Professor of Data Processing and Quantitative Analysis
University of Arkansas, Fayetteville
Paul L. Shaffer
Associate Professor of Management
University of Arkansas, Fayetteville

Arkansans and the Usury Law in 1982 27

Robert L. Savage
Professor of Political Science
University of Arkansas, Fayetteville
Diane Blair
Assistant Professor of Political Science
University of Arkansas, Fayetteville

Financial Institution Structure and Economic Development in Arkansas 29

Charles Venus, Ph.D.
Economic Consultant

The Growing National Debt: Is It a Cause for Concern 36

Thomas R. McKinnon
Director, Bessie B. Moore Center
for Economic Education
University of Arkansas, Fayetteville

Selected Arkansas and U.S. Economic Indicators 38

REVIEW EDITORIAL POLICY STATEMENT

In an effort to ensure that the articles appearing in the *Review* meet standards consistent with the goals of the College of Business Administration and of the University of Arkansas, an Editorial Advisory Board has been created to referee manuscripts submitted for publication. The current members of the Board are:

Jack E. Adams, University of Arkansas, Little Rock
Phillip W. Balsmeier, Louisiana Tech University
Michael W. Butler, University of North Alabama
G. James Francis, Colorado State University
David E. R. Gay, University of Arkansas, Fayetteville
John Kane, University of Arkansas, Fayetteville
Dale A. Level, University of Arkansas, Fayetteville
Harvey Lewis, University of Mississippi
John E. McCain, University of Arkansas, Fayetteville
James Millar, University of Arkansas, Fayetteville
C.P. Rao, University of Arkansas, Fayetteville
Eugene Sauls, California State University—Chico
Lloyd Seaton, Jr., University of Arkansas, Fayetteville
Donald White, University of Arkansas, Fayetteville
Joseph Ziegler, University of Arkansas, Fayetteville

The *Arkansas Business and Economic Review* is dedicated to information relevant to the business and economic environment of Arkansas. Manuscripts are solicited in these general subject areas:

1. Problems and issues of the Arkansas business community and economy;
2. Regional and industrial problems that have implications for the Arkansas economic community;
3. National business and economic issues of general interest to the people of Arkansas; and
4. Business and economic theory.

As a minimum, to be accepted for publication a manuscript must have literary value and the research upon which it is premised must have been conducted in a scientifically valid manner. Thereafter, the order of enumeration of the subject areas designates the system of priorities that will be applied in ascertaining the publishability of a manuscript. (However, the system of priorities will not be applied in such a way as to completely exclude any of the four categories of articles.)

Form requirements for manuscripts include double spaced originals with each chart or graph prepared in ink (camera ready) on a separate sheet. Manuscripts and all inquiries should be addressed to Editor, *Arkansas Business and Economic Review*, Bureau of Business and Economic Research, College of Business Administration, University of Arkansas, Fayetteville, Arkansas 72701, Telephone (501) 575-4151.

MARKETING PLANS: NATURE, PREREQUISITES, AND BENEFITS

C.A. Maile
Associate Professor of Marketing
Northern Illinois University

INTRODUCTION

Recent reviews of the literature by the authors and other researchers reveal that there has been little empirical research on the theory and practice of annual marketing planning.[1] Hopkins reports a study which outlines the formats of marketing plans utilized by several companies.[2] Another narrow segment of empirically based research focuses on the executives responsible for implementing the marketing plan.[3] Also, there are other empirical works on a wide variety of topics, including allocation of marketing funds and distribution cost analysis, which may contribute to an overall understanding of planning. [4] However, there is little empirical information about practitioner views of the planning process.

There is a definite need for additional studies exploring practitioner perceptions of planning's importance, benefits, and component activities. Therefore, the purpose of this paper is to report the results of a study intended to determine executive evaluations of : 1) prerequisites, 2) primary benefits, 3) essential activities, and 4) current state of the art of the marketing planning process. Information reported here constitutes a general overview of a more comprehensive national study intended to explore the state of marketing planning in various size firms, industries, and geographic regions.

STUDY DESIGN & METHODOLOGY

A survey was developed to assess practitioners' views of the planning process. A three step procedure was used in constructing the measuring instrument for this study. First, a list of potentially important planning topics was gleaned from the published literature. Next, a pilot study was undertaken to determine the apparent perceived degree of importance and level of agreement among executives regarding the selected topics. Then, a Likert-type scale was developed to measure those aspects of marketing planning which preliminary inquiries indicated to be important and subject to varying opinions.

Using this information, a four-page questionnaire was assembled containing thirty-four items requiring responses in a Likert format. There were also three open-ended questions enabling respondents to suggest specific means for improving the planning process. The questionnaire was divided into five planning topics: 1) general, 2) prerequisites, 3) primary benefits, 4) necessary activities, and 5) suggested improvements.

The survey instrument was mailed to a random sample of one thousand and sixty-nine marketing executives whose firms were listed in the Dun & Bradstreet Million Dollar Directory. Two hundred and twenty-five firms responded to the survey. Two hundred and twenty-three of the completed questionnaires were considered usable. Resulting data was coded and computer processed using the SAS (Statistical Analysis System) package. Various cross tabulations and frequency distributuions were constructed for purposes of data analysis. Both absolute and percentage frequencies were

computed for each response category. Even though five levels of agreement were possible regarding each statement about marketing planning, only the extremes of strong agreement or disagreement were considered most significant for purposes of this preliminary study.

FINDINGS

An examination of survey findings reveals that a good cross-section of U.S. firms is represented. Classifying respondents by SIC codes indicated wide distribution among various industries as shown in Table 1. However, a majority of firms responding to this survey were in either manufacturing or finance, insurance, and real estate businesses.

There is also a wide distribution of respondents by sales levels and number of employees as shown in Table 2. However, as might be expected, greatest and smallest numbers of respondents were respectively at the lowest and highest sales levels. The greatest and smallest number of respondents were also predictably associated with the lowest and highest number of employees.

TABLE 1
DISTRIBUTION OF RESPONDING FIRMS BY SIC CODES

SIC Class	Frequency of Respondents	Percentage of Respondents
Agriculture, Forestry, and Fishing	17	3%
Mining and Construction	30	6%
Manufacturing	225	46%
Transportation, Communication, and other Public Utilities	21	4%
Wholesale Trade	39	8%
Retail Trade	18	4%
Finance, Insurance, and Real Estate	114	23%
Services	29	6%
Total Number in all SIC Class	493	100%

Note: Some firms operate in more than one SIC classification, therefore the total of respondents in all SIC classifications number may be larger than the basic sample size of 225, or 493 as indicated in this table.

TABLE 2
DISTRIBUTION OF RESPONDENTS BY SALES LEVEL AND BY NUMBER OF EMPLOYEES

Level of Sales (Millions of Dollars)	Number of Respondents		Number of Employees	Number of Respondents	
	Frequency	Percentage		Frequency	Percentage
$1 to $10	120	54%	1-250	121	54%
11 to 100	60	27%	251-1,000	48	22%
101 to 1,000	30	13%	1,001-10,000	36	16%
Over 1,000	13	6%	Over 10,000	18	8%
Total	223	100%	Total	223	100%

Various statistical procedures, including chi-square and analysis of variance, were applied to data in tables 3-6. Quantitative results of these statistical analysis were consistent with verbal descriptions used for clarity of presentation in this discussion.

Current practices in marketing planning are better understood after analyzing the level of executive agreement with numerous statements about the general planning process. Sample statements together with levels of executive agreement are shown in Table 3.

There is strong agreement among executives that: 1) there is need for planning, 2) the primary planning responsibility should reside at the top marketing executive level, 3) annual marketing plans should be written documents, 4) marketing planning can enhance company profits, 5) there is benefit derived from formal marketing planning, and 6) at least as much emphasis should be placed on the implementation as is placed on the development of marketing plans. There was disagreement among executives on whether: 1) marketing planning should be executed so as to be separate from, but compatible with the overall corporate planning process, 2) marketing planning should be a staff rather than a line function, 3) greater dependence should be placed on external information sources, 4) organizational conflicts and personal problems prevent the

TABLE 3
PRACTITIONER ATTITUDES TOWARD SELECTED ASPECTS OF PLANNING
Frequency and Percentage of Responses in Each Category

	Strongly Agree		Mildly Agree		Undecided		Mildly Disagree		Strongly Disagree	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Need for marketing planning	166	74%	46	21%	2	1%	6	3%	3	1%
Formal planning is not beneficial	4	2%	9	4%	9	4%	41	18%	160	72%
Planning responsibility should reside with top management	126	57%	64	29%	7	2%	17	8%	8	4%
Need for compatibility between marketing and corporate planning	87	39%	59	27%	8	3%	37	17%	30	14%
Marketing planning should be primarily a staff rather than a line function	52	24%	63	29%	22	10%	45	20%	38	17%
Greater dependence should be placed upon external information sources	28	13%	66	30%	36	15%	66	30%	26	12%
Annual marketing plans should be written documents	152	68%	51	23%	7	3%	9	4%	4	2%
Marketing planning, no matter how thorough, probably cannot enhance company profits	5	2%	3	1%	1	1%	44	20%	170	76%
Planning should be emphasized at least as much as implementation	181	81%	37	17%	4	1%	1	1%	0	0%
Organizational conflicts and personnel problems impede successful planning	39	18%	78	35%	20	8%	55	25%	30	14%
Planning will be of limited value until it is further developed	32	14%	77	35%	18	8%	64	29%	31	14%

successful development and implementation of marketing plans, and 5) marketing planning will be of limited value to most companies until the planning process is further developed and refined. The popularly published philosophy of marketing planning appears to be widely supported among corporate executives.

A similar analysis can also be performed to determine executive agreement with published prerequisites of successful planning. Sample statements about these prerequisites, and corresponding levels of agreement appear in Table 4.

TABLE 4
ATTITUDES TOWARD PREREQUISITES FOR SUCCESSFUL PLANNING
Frequency and Percentage of Responses in Each Category

	Strongly Agree		Mildly Agree		Undecided		Mildly Disagree		Strongly Disagree	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Strong top management support	191	86%	29	13%	0	0%	1	1%	0	0%
Participation in the planning process by those who must implement resulting plans	176	79%	41	18%	1	1%	2	1%	1	1%
Enthusiastic support for the planning philosophy from all organizational levels	114	52%	82	37%	13	5%	11	5%	1	1%
Adequate training in the concepts and tools of planning for all those involved	128	58%	83	37%	6	3%	4	2%	0	0%
Need for centralized coordination of the planning process	132	60%	70	32%	11	4%	6	3%	1	1%
A well defined planning procedure	143	65%	61	28%	9	3%	7	3%	1	1%
Effective communication by top management regarding company goals and objectives	195	88%	24	11%	2	1%	0	0%	0	0%
A prior audit of the previous year's marketing plan	110	50%	91	41%	8	4%	8	4%	3	1%
More adequate forecasting procedures	87	40%	92	42%	28	12%	11	5%	2	1%

The table shows considerable agreement with all prerequisite statements. There is especially strong practitioner concurrence with the need for top management support, widespread management participation, and effective communication of company goals and objectives. However, there is less agreement on the need for more adequate forecasting procedures. Only 40% of the respondents strongly agree while 42% mildly agreed with this need. The relatively low level of agreement on this issue could indicate that current forecasting techniques are minimal, adequate, or not completely familiar to respondents completing the questionnaire for this study. Even so, answers to open-ended questions included in the measuring instrument tend to suggest that many general marketing executives are not completely familiar with the state-of-the-art and limitations of contemporary forecasting procedure.

Published statements about the benefits of marketing planning and corresponding levels of executive agreement, are shown in Table 5. There appear to be significant numbers of executives who strongly agree with virtually all of the potential planning benefits discussed in the current literature. Also, there is particularly strong agreement with the need to have management to think ahead systematically, better coordinate company efforts, and encourage development of performance standards. These data indicate that the benefits of marketing planning are widely understood by practicing managers.

Current literature suggests that the basic steps to marketing planning should include situation analysis, goal development, strategy selection, development

TABLE 5
EXECUTIVE'S ATTITUDES TOWARD PRIMARY BENEFITS OF MARKETING PLANNING
Frequency and Percentage of Responses in Each Category

	Strongly Agree		Mildly Agree		Undecided		Mildly Disagree		Strongly Disagree	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Primary Benefits of Marketing Planning include:										
Causing management to think ahead systematically	153	70%	60	27%	2	1%	5	2%	0	0%
Better coordination of company efforts	148	67%	68	31%	3	1%	1	1%	0	0%
Encouraging development of performance standards	109	50%	90	41%	14	6%	5	2%	2	1%
Facilitating increased precision in the formulation of company policies and objectives	102	47%	83	38%	24	10%	8	4%	2	1%
Encouraging more adequate contingency planning	103	47%	86	39%	18	8%	12	5%	1	1%
Stimulating management recognition of interacting responsibilities	103	47%	82	37%	23	10%	10	5%	1	1%
Providing a framework for stematic self-examination	106	48%	89	40%	13	6%	10	5%	2	1%

of tactics, budget development, control procedures, and computer applications to the planning process. These steps and levels of agreement with them are shown in Table 6. Data indicate that fifty-seven to seventy-five percent of the respondents strongly support the need for having all but the last of these components in the planning process. However, only 25% of those surveyed were very certain of the need for computerized technology in evaluating alternatives plans. In general, the widespread agreement among academic writers regarding the required phases of marketing planning is paralleled by corresponding agreement among practitioners.

CONCLUSIONS AND IMPLICATIONS

Theorticians and practitioners are clearly in agreement as to the ideal marketing planning model. They hold similar attitudes regarding the need, prerequisites, components, and benefits of

TABLE 6
ATTITUDES OF CORPORATE EXECUTIVES REGARDING WHAT THE MARKETING PLANNING PROCESS SHOULD INCLUDE

	Frequency and Percentage of Responses in Each Category									
	Strongly Agree		Mildly Agree		Undecided		Mildly Disagree		Strongly Disagree	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
The marketing planning process should include at least the following activities:										
Analyzing present company situation to determine the status of factors such as market penetration or distribution strengths and weaknesses ...	165	75%	44	20%	4	2%	6	3%	1	1%
Development of specific objectives and goals for company, division, department, product, territory and other marketing entities	162	74%	50	23%	4	2%	4	2%	0	0%
Selection of a preferred strategy from several alternatives	132	60%	72	33%	10	5%	4	2%	1	1%
Translating strategies into specific action programs	166	76%	47	21%	2	1%	3	2%	2	1%
Developing cost and revenue budgets to support goal achievement	151	69%	57	26%	8	4%	3	2%	1	1%
Specifying and scheduling control procedures to monitor the planning process...	124	57%	72	33%	17	8%	5	3%	1	1%
Devising applications of computer technology to evaluate alternative plans...	54	25%	77	36%	61	28%	20	10%	7	4%

the formalized annual planning process. This situation is in contrast to differing attitudes regarding many other concepts in the marketing discipline. For example, it is widely known that the marketing concept itself is more highly esteemed in the current literature than in the field of practice.[5]

A wide acceptance of the planning model among executives may not be reflected in actual practice. Many individuals who claim to understand the planning model may be reluctant to implement it. Perhaps one reason for this situation can be attributed to the law of fast forgetting. Academicians frequently interpret this law to mean that many people learn and believe in the planning process yet they fail to see its applicability in the field. It should also be noted that planning benefits which are well known to the marketer may be difficult to communicate throughout the ranks of management. Because many of these benefits may be intangible and subject to long-term realization, they are often accorded a low priority by tough-minded, profit-oriented chief executive officers. Limitations of time, personnel, finances, technology and other resources also encourage managers to be reactive to short-term problems rather than being proactive to long-term eventualities.

Levels of practitioner agreement with formalized planning statements have other far reaching and complex implications within each business enterprise. Strong executive agreement with specific planning statements can be only a general reflection of managerial attitudes and practice in the field. This is because many firms which acknowledge their

practice of formalized planning operate from separate terminologies or verbal planning models. Therefore, it is understandable that practitioners in other firms less fluent in planning terminology may exhibit widely varied levels of adherence to academic planning guidelines.

Even though the results of this study indicate strong agreement between academic author and practitioner regarding the ideals of marketing planning, further research is needed to determine the extent to which the theoretical model is implemented in practice. Additional studies might also provide valuable information about organizational impediments to the marketing planning process.

[1]Stanley F. Stasch & Patricia Lanktree, "Can Your Marketing Planning Procedures Be Improved?," *Journal of Marketing*, Summer, 1980, p.79.

[2]David S. Hopkins, "The Short-Term Marketing Plan," The Conference Board Report No. 5657, New York, 1972.

[3]David J. Luck & Theodore Nowak, "Product Management—Vision Unfulfilled," *Harvard Business Review*, May-June, 1965, pp. 143-154.

[4]For example see: Richard A. Feder, "How to Measure Marketing Performance," *Harvard Business Review*, May-June, 1965, pp. 132-142.

[5]William J. Stanton, *Fundamentals of Marketing*, McGraw-Hill, New York, 1978, pp. 10-11.

POPULAR PERCEPTIONS OF FINANCIAL INSTITUTIONS AND THE USURY QUESTION IN ARKANSAS

Charles R. Britton
Professor of Economics
University of Arkansas, Fayetteville

Robert L. Savage
Professr of Political Science
University of Arkansas, Fayetteville

On March 31, 1980, President Carter signed into law the Depository Institutions Deregulation and Monetary Control Act of 1980. This legislation was the result of many years of study and compromise by Congress and certain regulatory agencies not to mention the financial institutions involved. At the time Senator Proxmire referred to it as "...the most significant banking legislation before the Congress since the passage of the Federal Reserve Act in 1913."[1] As important as the act was to the nation as a whole, it may have been more important to the state of Arkansas, in particular, for a very specific reason. That reason is the state's constitutional provision on usury which provides a limitation on the amount of interest that can be charged.

HISTORICAL DEVELOPMENT OF BANKS AND USURY IN ARKANSAS

Before pursuing the usury concern and the general image of banks, a brief review of the historical development of banks as institutions in the United States and, more especially, in Arkansas, is in order. The banking industry in the United States exists by public consent and its function is to serve the needs of the public to the desired level of satisfaction required by that public. Banks discharge their function by insuring safety to the monetary system and helping promote the welfare and growth of society. In general, the banking industry has done this original task well; but, as any observer of the industry will recognize, there have been major alterations in the behavior of banks and the function desired by the public. Early bank failures, fraud, financial panics, and apparent misuse of the public trust by the financial community led to a re-ordering of objectives. A lack of regulation and an inadequate understanding of banking theory led to suspension of specie redemption by almost every bank in the U.S. in 1819, 1837, 1857, and 1860. This brought about the National Banking Act of 1863 which helped to alleviate the problem. The financial panics of 1873, 1884, 1893, 1903, and 1907 pointed out the still existing defects in the banking system such that corrective actions were taken in the form of the Currency Act of 1900 and the Aldrich-Vreeland Act of 1908. Modern regulation of the banking system actually began with the Federal Reserve Act of December 23, 1913 and the Banking Acts of 1933 and 1935 which established the existing central banking system and the Federal Deposit Insurance Corporation. These two organizations added the needed stability and deposit security to the banking industry.[2]

In Arkansas the banking industry evolved with these national developments but with certain notable exceptions. The first act of the state legislature upon statehood in 1836 was to charter the Real Estate Bank of the State of Arkansas and the second act chartered the Bank of the State of Arkansas.[3] Obviously, the legislators recognized, generally, the importance of the role of finance in economic development and, particularly, the importance of assistance in meeting the expenditures of government. The Panic of 1837 led to the eventual collapse of the banks—the State Bank was placed in Receivership in 1843. Charges of mismanagement, inefficiency, and outright fraud against the Real Estate Bank and general mistrust of the public led, in 1846, to the first amendment to the Arkansas Constitution: prohibition of the incorporation of any banks.[4] The National Banking Act of 1863 led to charters within the borders of the state as did the State Constitutions of 1868 and 1874. From that time, the trend in Arkansas banking has been very similar to that of the nation; and the growing faith of the state's residents in financial institutions to perform social functions has seemed well supported by bank actions. However, in the era of mistrust a usury limit of ten percent was placed in the state constitution. Not only does it now exist but it exists "with teeth." A debt instrument can be canceled if it is proven that the interest charged exceeds the 10 percent limit. Arkansas had the most severe punishment in existence in the U.S. concerning the usury question. The generally low interest rates that prevailed nationally until recent years caused little difficulty for Arkansas financial institutions. Recent developments, however, have contributed to a general outflow of potential loan funds from the state. At the same time, attempts to change or abolish the usury provision through constitutional amendment, as recently as 1974 and 1980, have failed by wide margins as Arkansans voted to keep the usury limit established by the 1874 Constitution.

USURY AND THE DEPOSITORY INSTITUTIONS DEREGULATION AND MONETARY CONTROL ACT OF 1980

Title V of the Depository Institutions Deregulation and Monetary Control Act of 1980 overrides state usury provisions, including those having a constitutional basis, on specified types of loans. In particular, Title V:

Gives states until April 1, 1983, to reinstate usury ceilings by adopting a new law or allowing the voters to adopt a provision stating explicitly and by its terms that the state does not want to be subject to the provisions of the title.

Exempts business and agricultural loans of $25,000 or more from state usury provisions until April 1, 1983, replacing them with the restriction that interest rates on such loans may not exceed "5 per centum in excess of the discount rate, including any surcharge thereon, on ninety-day commercial paper in effect at the Federal Reserve bank in the Federal Reserve district where the person is located."

Provides for forfeiture of all interest on any loan on which the lender has knowingly charged a higher rate than allowed by the act and authorizes persons paying interest in excess of the permitted rate to recover in a civil action twice the amount of interest paid.

Allows state-chartered banks and both federally and state-chartered insured savings and loan associations and credit unions to disregard state interest ceilings on other

types of loans in those cases where the maximum rate prescribed by the state is exceeded by "a rate of not more than 1 per centum in excess of the discount rate on ninety-day commercial paper in effect at the Federal Reserve Bank in the Federal Reserve district where such State bank...is located..."[5]

For the State of Arkansas, the April 1, 1983 deadline for reinstatement of the usury limitation provides a definite problem since the people in Arkansas appear to have little consensus on the matter except that they generally desire to establish some limit by provision in state law. In part, this conclusion is based on the 1974 vote that rejected outright abolition of the constitutionally established 10% limit and the 1980 vote that refused to allow the State Legislature ultimate authority in the matter.

ATTITUDES TOWARD INSTITUTIONS IN ARKANSAS

In order to examine the attitudes toward banks and usury, the authors utilized an Arkansas Household Research Panel (AHRP) survey. This service is provided through the College of Business Administration at the University of Arkansas. The questionnaire used by the authors was mailed in March 1980 to a representative panel of Arkansas households. There was a response rate of 70.9 percent (639 out of 901 mailed out) with some returns considered unusable.

Table 1 presents a summary of responses to the question of degree of confidence that Arkansans had in ten different institutions. For clarification the institutions are ranked from high to low according to the extent that the answer "a great deal of confidence" was elicited. The institutions utilized in the survey questionnaire were chosen in an effort to be comparable to those used in national surveys in order that some comparisons were possible between Arkansans and their national counterparts.[6]

For instance, national surveys include the executive and legislative branches of government (i.e., President and Congress) while the state questionnaire replaced those with the Governor's Office and State Legislature. The four institutions of medicine, higher education, television news, and organized labor are identified in exactly the same way in both questionnaires.

TABLE 1
CONFIDENCE IN INSTITUTIONS EXPRESSED BY ARKANSANS
(in percentages)*

Institution	A Great Deal of Confidence	Only Some or Hardly Any Confidence	n
Medicine	51.7	48.2	601
Banks	51.2	48.9	604
Higher Education	47.4	52.6	605
Savings and Loans	44.4	55.6	603
Television News	24.5	75.5	604
Electric Utilities	18.2	81.8	604
Governor's Office	14.4	85.7	606
Organized Labor	10.9	89.1	605
Oil Companies	8.1	91.9	603
State Legislature	7.3	92.7	602

*Totals may not sum to 100% due to rounding error.

In comparing the results of the state survey with the national surveys, it is interesting to note certain similarities in those individuals expressing "a great deal of confidence" in the different institutions. Those institutions in the state survey for which results are very comparable to those in national surveys include television news, the executive and legislative branches of government, and organized labor.

More Arkansans and their national counterparts expressed more confidence in television news than in either the executive or legislative branches of government but in both cases, it was less than 30 percent of the respondents. Organized labor also fared about the same for Arkansans and Americans in general (nearly 11 percent expressed a great deal of confidence) which seemed somewhat strange since Arkansas still has a right-to-work law.

Business institutions provide a more complex situation for assessment. As shown in Table 1, Arkansans clearly draw a distinction between financial institutions such as banks and savings and loan institutions in which confidence is strong and energy-related corporations such as electric utilities and oil companies in which confidence is rather low.

It is interesting to note that controversy does not significantly alter public confidence in an institution. Banks in Arkansas have been much involved in the usury limitation issue in the state for years, often being subjected to severe criticism for their role in the controversy. Yet, in the face of a general decline in public confidence in other social institutions, banks and related financial institutions have maintained their high standing.

BANKING AND USURY OPINIONS BY ARKANSANS

As was observed in the preceding section, over 50 percent of the Arkansans surveyed expressed a high degree of confidence in banks along with medicine. These were the only two institutions for which a majority of respondents assigned the "great deal of confidence" rating. In order to understand the foundations of this feeling of confidence which Arkansans have toward the banking industry, additional questions were asked of the Arkansas Household Research Panel members. Also included in the questionnaire were opinions concerning the usury issue in Arkansas. The results are presented in Table 2.

As is shown, more than two of every three persons questioned indicated that they felt most people were treated fairly by commercial banks. In fact, only 11.4 percent felt people received unfair treatment. This is consistent with the high degree of confidence that Arkansans have in banks.

With respect to the availability of credit only 2.5 percent felt that credit was more available in Arkansas while 54.0 percent believed the availability of credit to be less than in nearby states. Although one cannot be certain as to the basis for the above belief it would seem plausible that the average Arkansan believes that the usury law acts to limit credit availability in the state.

The third question in this section pertains directly to the usury issue in that it asks if there is a law in existence which limits the interest or finance charge. Almost four out of five respondents (78.1 percent) knew of the existence of the usury law. Of the respondents who indicated knowledge of the existence of a usury law in Arkansas, once again nearly four out of five correctly identified the ten percent limit. In other words, nearly two-thirds of the Arkansans surveyed were aware of the state constitutional provision. Moreover, as the response to the fifth question indicates, most Ar-

TABLE 2
BANKING AND USURY OPINIONS EXPRESSED BY ARKANSANS
(in percentages)*

1. Do you feel that most people are treated fairly or unfairly by commercial banks?	
Fairly	67.7
Unfairly	11.4
Don't Know (No Opinion)	20.9
2. Compared to the availability of credit in nearby states today, do you think credit in Arkansas is:	
More Available	2.5
Less Available	54.0
About the Same	30.7
Don't Know (No Opinion)	12.9
3. As far as you know is there any law in Arkansas which limits the state of interest or finance charge for the use of credit?	
Yes	78.1
No	4.1
Don't Know (No Opinion)	17.7
4. If "yes", what is the legal limit?	
5-8 percent	.4
10 percent	79.6
11-15 percent	3.1
16-20 percent	2.6
Don't Know (No Opinion)	14.5
5. Should the interest or finance charge for credit be limited?	
Yes	84.0
No	16.0
6. If "yes," how should credit be limited? Check **only one category** below.	
By direct vote of the people	33.8
By vote of the legislature	9.5
Put into the state constitution	9.7
Tied to the Federal Reserve discount rate	22.8
By free market competition	12.6
Don't know (No Opinion)	10.6
Other (Please specify)	1.1
7. During the last **2** years, have you applied for a loan of any kind in the state of Arkansas which was **not** granted?	
Yes	7.8
No	92.2

*Totals may not sum to 100% due to rounding error.

kansans believe that the interest rate or finance charge should be limited. Due to a mistake in the questionnaire design, however, the results of question six cannot be judged as valid since the question incorrectly reads "If 'yes' how should credit be limited?" instead of correctly being stated as "If 'yes' how should the interest rate on credit be limited?" Still, the responses suggest a lack of consensus on just what the legal limit ought to be.

The final question addresses the recent bank loan experiences of Arkansans. Specifically, respondents were asked if they had applied for and been denied a loan during the last two years. The survey was taken in March 1980, so the period under consideration would be March 1978 to March 1980. As can be seen, very few of the respondents answered affirmatively to this question (7.8 percent) which seems somewhat contradictory to the majority belief that credit is less available in Arkansas than in nearby states. One possible explanation is that the Arkansans surveyed recognized that credit was somewhat unavailable and therefore did not apply for loans during this time. Another possible explanation concerns the qualifications of the respondents themselves. The profile data on the respondents indicate the average panel household income for 1979 was $23,363, somewhat above the state average. It is therefore possible that the individuals in the survey were more credit-worthy than the average Arkansan. In any event the scarcity of affirmative answers to this question on actual loan experiences seems contrary to other banking beliefs of Arkansans.

COMPARATIVE OPINIONS OF COMMERCIAL BANKS IN ARKANSAS

Another section of the questionnaire dealt with perceptions that Arkansans have of commercial bank performance.

Comparable to findings reported above, most Arkansans, as shown in Table 3 agreed with the statement that banks in other states are more profitable than those located within the state. There is less perceived difference in the service that customers receive from banks in Arkansas versus banks in other states which implies that Arkansans believe that state boundaries are less important in producing variations in traditional banking services. There was a definite difference, however, between the perceived friendliness toward customers according to bank size. Not surprisingly, nearly seventeen percent strongly agreed that smaller banks were friendlier than larger ones while only just over 20 percent disagreed with the statement in any degree. On the other hand, respondents showed little consensus on the comparative profitability of large and small banks.

A strong consensus did emerge with regard to the willingness of Arkansans to pay more for banking services. Over 85 percent of the respondents indicated some degree of disagreement with willingness to pay more. It seems that if Arkansas banks attempt to increase service charges to enhance their profitability, there will be significant resentment among their clients.

There was a significant difference of opinion on the last question in this section of the survey. Once again it dealt with the usury issue; and, similarly, it produced definite and strong opinions. The statement, "A constitutionally-fixed interest rate only hurts the wealthy, not the little guy," produced a seeming consensus with more than 86 percent of the respondents disagreeing. This statement clearly evoked the strongest opinions. However, the answers are subject to various interpretations, raising some question about actual consensus. The statement may mean that everyone is hurt

TABLE 3
COMPARATIVE OPINIONS OF COMMERCIAL BANKS IN ARKANSAS EXPRESSED BY ARKANSANS
(in percentages)*

1. Banks located in other states are more profitable than banks operating in Arkansas.	
Strongly Agree	11.7
Agree	27.6
Slightly Agree	24.4
Slightly Disagree	14.0
Disagree	19.0
Strongly Disagree	3.3
2. Banks in Arkansas treat their customers better than banks in other states.	
Strongly Agree	4.4
Agree	22.6
Slightly Agree	27.4
Slightly Disagree	17.8
Disagree	25.0
Strongly Disagree	2.8
3. Smaller banks are much friendlier than larger banks.	
Strongly Agree	16.5
Agree	41.8
Slightly Agree	20.4
Slightly Disagree	8.9
Disagree	11.0
Strongly Disagree	1.3
4. The larger a bank is, the more profitable it is.	
Strongly Agree	3.9
Agree	23.6
Slightly Agree	25.7
Slightly Disagree	20.9
Disagree	22.1
Strongly Disagree	3.7
5. People are willing to pay more for banking services than they are now charged.	
Strongly Agree	.7
Agree	4.7
Slightly Agree	8.7
Slightly Disagree	20.7
Disagree	42.5
Strongly Disagree	22.7
6. A constitutionally-fixed interest rate only hurts the wealthy not the little guy.	
Strongly Agree	2.2
Agree	5.4
Slightly Agree	5.8
Slightly Disagree	14.6
Disagree	41.6
Strongly Disagree	30.4

*Totals may not sum to 100% due to rounding error.

equally regardless of wealth, that no one is hurt by a usury law, or even that Arkansans believe the little guy is hurt more than the perceived "fat cat."

CONCLUSIONS

As the preceding sections of this paper have indicated, banks and the banking industry in Arkansas are highly regarded. Arkansans have a great deal of confidence in their banks and, in general, feel that the treatment they receive is just. The primary issue of concern to Arkansans who were surveyed almost always centered on usury. As the responses indicated, the average Arkansan is knowledgeable about this issue and, furthermore, has strongly felt convictions about it. As was pointed out earlier, banks are held in high esteem even though the position of commercial banks on the controversial usury issue has not been accepted widely by Arkansans.

This points to the special significance of the Depository Institution Deregulation and Monetary Control Act of 1980. As mentioned earlier, the Federal override of state usury laws allows states to reinstitute usury ceilings until April 1, 1983. At this time, there are two contradictory views of the impact on Arkansas. The first view recognizes that usury is in the State Constitution, is not subject to final action by the State Legislature, and consequently the usury ceiling is automatically reinstated unless otherwise eliminated with a constitutional amendment. A second but minority position views the usury situation in Arkansas as being overturned unless positive action is taken through the legislative process or through popular election. Either way, the opposing forces are marshalling their resources for the November 1982 election. If April 1, 1983 arrives with the usury ceiling in existence, it goes without saying that the disruption of the financial markets in Arkansas may be catastrophic if, nationally, interest rates remain high.

---

[1]"The Depository Institutions Deregulation and Monetary Control Act of 1980", *Economic Perspectives*, Federal Reserve Bank of Chicago, September/October, 1980.

[2]For a more complete history of banking developments in the United States, see Harry N. Scheiber, Harold G. Vatter, and Harold Faulkner, *American Economic History* (New York: Harper and Row, 1976).

[3]See William J. Thomas, "Frontier Day Roots of Arkansas' Development Program," *Arkansas Business Bulletin* (Fayetteville: Bureau of Business and Economic Research, University of Arkansas, February, 1953), pp. 1-8.

[4]Fay Hempstead, *A Pictorial History of Arkansas from Earliest Times to the Year 1890* (N.D. Thompson Publishing Co., 1899), pp. 265-285.

[5]Federal Reserve Bank of Chicago, op. cit., p. 16-17.

[6]Strict comparisons can not be made for several different reasons which are summed up in Everett Carll Ladd, Jr., "The Polls: The Question of Confidence," *Public Opinion Quarterly*, 40 (Winter, 1976-77), 544-552; and Phillip Shaver, "The Public Distrust," *Psychology Today*, 14 (October, 1980), 44-46.

AN EMPIRICAL EXAMINATION OF TURNOVER: A COMPARISON OF EXISTING AND TERMINATED EMPLOYEES' REASONS FOR SEPARATION[1]

Peter M. Ginter
Associate Professor of Management
University of Arkansas, Fayetteville

Thomas W. Jones
Associate Professor of Data Processing and Quantitative Analysis
University of Arkansas, Fayetteville

Paul L. Shaffer
Associate Professor of Management
University of Arkansas, Fayetteville

INTRODUCTION

During the period of April 1, 1981, through July 1, 1981, a University of Arkansas research team from the College of Business Administration and selected administrative staff of the Arkansas State Department of the Office of Personnel Management (OPM/LR) undertook an in-depth study of employee turnover in state government. A fundamental purpose of this applied research effort was to provide current information needed to reduce an unacceptable employee turnover rate. The research objectives were: (1) to develop biodata and attitudinal profiles of terminated and current state employee populations, (2) to define turnover operationally, and (3) to identify major causes of State employee turnover.

The research project was initiated because of the potential benefits to be gained from such turnover information. Analysis of these data could provide policy makers with information needed for positive and corrective action regarding various personnel policies (pay, benefits, supervision, working conditions, etc.) and to facilitate manpower planning. Turnover is often viewed as being symptomatic. During periods of low unemployment the market conditions tend to increase the potential of turnover. Other conditions that may promote turnover are unique to the organization, and may reside in personnel practices and policies of the organization. As suggested by the research objectives stated above, this latter concern was the focus of present efforts.

Prior to the presentation of the results of this study, a definition of and some general observations concerning turnover are discussed.

EMPLOYEE TURNOVER

Recent personnel literature indicates that, given an opportunity, employees who experience a serious sense of deprivation or dissatisfaction on the job are likely to leave the organization, either temporarily or permanently.[2] Temporary and/or periodic withdrawal from the organization is commonly referred to as absenteeism. Permanent withdrawal, either voluntary or involuntary, is typically noted as the separation rate or, more simply, as turnover.

While turnover costs may vary greatly among different organizations, and among different occupations, it is generally accepted that there are two major costs: (1) the costs resulting from disruption of work flow plus human resource investments such as training and (2) the costs associated with recruitment, selection, re-training of replacement employees as well as other investments in human resources.

Voluntary Turnover

Voluntary separations (turnover) from the organization need to be analyzed in terms of their significance to the organization. As noted earlier, excessive turnover can be costly because organizational investments in training, selection, and recruitment are lost. Obviously, some level of turnover might be acceptable and even desirable. An example of possibly acceptable turnover would be termination of those employees who demonstrate marginal job performance, or those employees who perceive incongruence between their personal goals and the organization's. This is obviously a value-laden supposition. However, managers should strive to keep turnover at "normally acceptable" levels.[3] An important aspect of this assertion is that turnover can be managed. Thus, less desirable employees should be allowed to leave the organization while more effective employees are retained through more effective and more efficient human resource management techniques. With an Arkansas State Government annual turnover rate of approximately 32% for the previous three calendar years, it is reasonable to assume a significant number of effective employees are terminating their employment with the State. Such a large turnover surely had a significant impact on organizational effectiveness.

When examining employee turnover it is generally desirable to separate, to the extent possible, involuntary separations (death, illness, mandatory retirement, firing, etc.) from voluntary separations. Although certain of these types of termination, such as firing, are subject to managerial control, involuntary separations are often excluded from further analysis because they are not exclusively subject to managerial control. However, in this research, involuntary separations were inconsequential relative to the number of total separations and, as a result, were combined into total separations for analysis purposes.[4]

Analyzing Turnover Data

Exit interviews are often used to obtain data for analyzing the causes of employee dissatisfaction and the resulting turnover. However, much of the past research indicates that the exit interview tends to be deficient in identifying a terminating employee's sources of dissatisfaction or conflict. Interviewers and interviewees are likely to be defensive, and the real reasons for separation are often misrepresented or avoided. Yet it is essential for the organization to accumulate data concerning the causes of employee turnover. The post-employment survey seems to offer an optimum means for obtaining valid data on the reasons underlying turnover.[5]

METHODOLOGY

In order to understand or explain the reasons for the recently experienced large turnover of State employees, a brief questionnaire was sent to a random sample of past employees. For this research, the terminated employee population was defined as employees who left their State jobs during the 1980 calendar year (the random sample of terminated State employees was extracted from 1980 W-2 Forms). As illustrated in Table 1 (Questions 1-14), these terminated employees were asked to indicate the extent to which they agreed or disagreed with

various statements concerning reasons why they left State employment. In order to compare the importance of reasons expressed by terminated employees with their perceived importance by current employees, a similar questionnaire was sent to a random sample of current employees. These present employees were asked to indicate the reason they **might** leave State employment. (See Table 2, Questions 1 through 12.) The current employee population constituted persons presently employed by the State. Both questionnaires were single sheet, two page instruments (i.e., front and back), and each was accompanied by a cover letter and instructions.

The questionnaires were constructed to reflect 14 possible primary reasons for employee turnover as identified in present personnel literature.[6] Thus, the focus of the research was directed at items internal to State human resource management, that is, those variables over which managers and others in State government might exert some control. Additional questions were also included to measure possible job satisfaction variables, demographic concerns, and to insure treatment of the research objectives specified by management.

All survey addresses were selected by personnel of OPM/LR. However, all questionnaires were returned by the respondent directly to the university research team using pre-addressed, prepaid postage envelopes. The sample sizes were determined by considering the sampling costs, a priori return rates anticipated, and other restrictions specified by OPM/LR. Due to a limited budget, no attempt was made to increase return rates by mailing follow-up letters reminding persons to complete and return the questionnaires if they had not already done so.

Terminated Employee Questionnaire Returns

A 20% random sample, drawn from a population of 6,200 terminated employees (n=1,240), was extracted from Office of Personnel Management W-2 Form mailing lists. Of this sample, 190 questionnaires were returned by the postal service as "non-deliverable". Thus, the terminated employee sample size was 1,050. The number of usable questionnaires totaled 268 for a return rate of 25 percent

Current Employee Questionnaire Returns

Based on a current employee population of 17,500 persons, a ten percent sample (n=1,750) was randomly drawn from existing payroll files. Of the 1,750 questionnaires, 150 were "non-deliverable" reducing this sample size to 1,600. There were 729 usable questionnaires accounting for a 46 percent return rate for current employees.

STUDY RESULTS

Profiles of responses by the terminated and current employee samples are presented in Tables 1 and 2 respectively. An examination of the median score response for each question provides much insight into the major areas of dissatisfaction and concern of recently terminated and current state employees. The median responses of the two samples are generally the same for analogous statements on the questionnaires, although there are several exceptions. In addition, demographic data for the survey respondents are provided in these two tables.

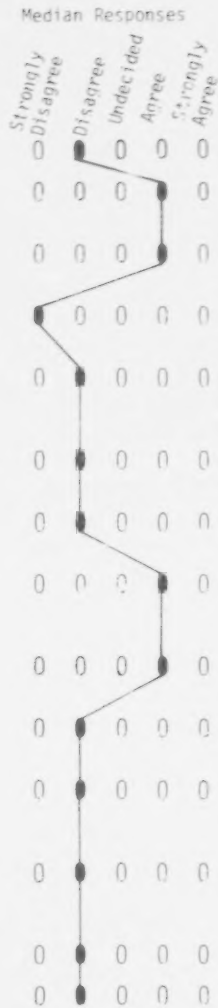
As indicated earlier, turnover has been demonstrated to bear a close relationship to the level of satisfaction in/with the organization and the degree to which work interferes with other personal satisfactions. For example, the literature (see the discussion section for reference sources) suggests that turnover can

Table 1

STATE OF ARKANSAS EMPLOYEE TURNOVER SURVEY

THE FOLLOWING STATEMENTS ARE CONCERNED WITH IDENTIFYING WHY EMPLOYEES LEAVE STATE EMPLOYMENT. PLEASE INDICATE THE EXTENT TO WHICH YOU AGREE OR DISAGREE WITH EACH STATEMENT. MARK YOUR RESPONSE BY FILLING IN THE APPROPRIATE OVAL.

Responses of Employees Who Have Left State Employment



1. A reason for leaving State employment was a lack of opportunity to participate in the decision-making processes on my last job.
2. Low pay was a reason for leaving State employment.
3. Leaving State employment was a voluntary action on my part.
4. I left State employment because I had few close friends at work.
5. A reason for leaving State employment was that I never received the proper job training.
6. A lack of communication with my boss concerning my work objectives and tasks was a consideration in my leaving State employment.
7. I left State employment because the job I was performing was too routine and/or repetitive.
8. Lack of promotion opportunities was a reason for leaving State employment.
9. A reason for leaving State employment was that merit was not properly considered for pay increases and/or promotion.
10. A reason for leaving State employment was because of a lack of overall job satisfaction.
11. A reason for leaving State employment was that I found a better job.
12. I left State employment because I am now more involved in community activities (such as church, social, voluntary organizations).
13. Leaving State employment was the result of a feeling that the goals and values of my department were in conflict with my personal goals and values.
14. I left State employment for a new job closer to home.
15. Of the reasons for leaving State employment specified in statements 1 through 14 above, the primary reason was statement number ____. (Please record only one number of the previous statements.)

    A secondary reason was statement number ____. (Please record the number of the second most important reason.)

Table 1 (continued)

-2-

		Median Responses
16.	I feel that I have a high work commitment.	0 0 0 0
17.	When I accepted State employment, I intended at that time to make a permanent career in State employment.	0 0 0 0
18.	My immediate supervisor was a good supervisor for my workgroup while employed by the State.	0 0 0 0
19.	The performance appraisal used accurately rated my job performance.	0 0 0 0
20.	Dissatisfaction with State employment would be reduced if the following existed:	
	a. Better health insurance	0 0 0 0
	b. Longer vacations	0 0 0 0
	c. Lower on-the-job pressures	0 0 0 0
	d. More sick leave	0 0 0 0
	e. A better retirement program	0 0 0 0
	f. Less job discrimination	0 0 0 0
	g. Better qualified co-workers	0 0 0 0
	h. Higher quality of supervision	0 0 0 0
	i. More opportunities for promotion	0 0 0 0
	j. Other (please specify)_____	
	k. Other (please specify)_____	

Percentages			Percentages		
	21.	How long has it been since you left State employment?		24.	What is your educational level? (Indicate highest completed.)
1.9	0	Less than 1 month	1.9	0	Elementary School (grades 1-8)
10.6	0	1 month to less than 6 months	4.5	0	Some high school or some technical training
51.7	0	6 months to less than 1 year	13.9	0	Graduated from high school or GED (Graduate Equivalency Degree)
35.8	0	1 year or more	18.8	0	High school degree plus technical training or apprenticeship
	22.	Are you:	27.1	0	Some college
67.0	0	Female	13.2	0	Graduated from college (B.A., B.S., or other bachelors degree)
33.0	0	Male	9.4	0	Some graduate school
	23.	Are you:	11.3	0	Graduate degree (Masters, LL.B., Ph.D., M.D., etc.)
2.3	0	American Indian/Native American		25.	Are you:
0.0	0	Asian or Pacific Islander	67.3	0	Married
7.5	0	Black	32.7	0	Single
0.0	0	Hispanic			
89.5	0	White			
0.8	0	Other			

Table 1 (continued)

-3-

Percentages

26. How old are you?

1.5	0	Under 20 years
41.5	0	20 years to less than 30 years
31.3	0	30 years to less than 40 years
11.7	0	40 years to less than 50 years
4.2	0	50 years to less than 55 years
2.6	0	55 years to less than 60 years
3.4	0	60 years to less than 65 years
3.8	0	65 years or over

27. How many total years had you been a State Government employee?

26.0	0	Less than 1 year
38.6	0	1 year to less than 3 years
24.4	0	3 years to less than 9 years
10.7	0	9 years to less than 30 years
0.4	0	30 years or more

28. When will you be eligible to retire voluntarily?

8.4	0	I'm eligible now
0.4	0	In less than 2 years
1.2	0	2 years to less than 5 years
88.4	0	5 years or more
1.6	0	Retired/Disability

THIS COMPLETES THE SURVEY. WE APPRECIATE YOUR COOPERATION IN TAKING THE TIME TO RESPOND TO THESE ITEMS. PLEASE ENCLOSE THIS QUESTIONNAIRE IN THE PREPAID POSTAGE, SELF-ADDRESSED ENVELOPE AND MAIL BEFORE MAY 15, 1981. THANK YOU.

result because an employee has few close friends at work, proper job training was never received, or personal goals conflict with departmental goals. These points are cited because the responses by both terminated and current employees do not support previous research findings. However, low pay, lack of proper procedures for determining pay increases and/or promotions, and the need for improved communication are reasons for turnover cited both by the respondents and in the literature.

Another interesting observation concerns the career plans of State employees. Many of the terminated and current employees are younger than 30 years of age, have at least some college education, and have worked in State government relatively few years. Linking these facts with the level of turnover suggests that many terminated employees may have experienced a reversal in their career plans. Also, a significant portion of both employee samples perceives upward mobility within the state government to be restricted and generally dysfunctional for their continued personal career progress.

Reasons Terminated Employees Left

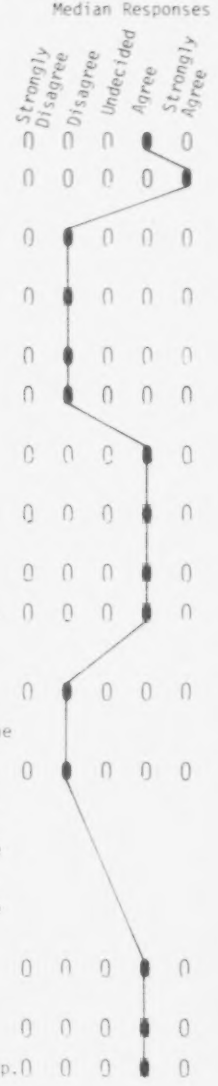
The terminated employee questionnaire (Question 15) requested that respondents list from the preceding 14

Table 2

STATE OF ARKANSAS CURRENT EMPLOYEE TURNOVER SURVEY

THE FOLLOWING STATEMENTS ARE CONCERNED WITH IDENTIFYING MAJOR SOURCES OF DISSATISFACTION AND PROBLEMS WITH STATE EMPLOYMENT. PLEASE INDICATE THE EXTENT TO WHICH YOU AGREE OR DISAGREE WITH EACH STATEMENT. MARK YOUR RESPONSE BY FILLING IN THE APPROPRIATE OVAL.

Responses of Current State Employees



1. There is a lack of opportunity to participate in the decision-making processes on my present job.
2. Low pay is a problem in State employment.
3. The lack of opportunity to develop many close friends is a source of job dissatisfaction.
4. A problem with State employment is that I never received the proper job training.
5. The lack of communication with my boss concerning my work objectives and tasks is a problem.
6. My job is too routine and/or repetitive.
7. There is a lack of promotion opportunities in State employment.
8. A problem with State employment is that merit is not properly considered for pay increases and/or promotion.
9. The lack of overall job satisfaction in State employment is a problem.
10. There are better jobs available outside of State employment.
11. There is a lack of opportunity to become more involved in community activities (such as church, social, voluntary organizations).
12. A source of dissatisfaction with State employment is that the goals and values of my department are in conflict with my personal goals and values.
13. If I left State employment, of the problems and reasons for dissatisfaction specified in statements 1 through 12 above, the primary reason would be statement number _____. (Please record only one number of the previous statements.)

    A secondary reason would be statement number ____. (Please record the number of the second most important reason.)
14. I feel that I have a high work commitment.
15. When I accepted State employment, I intended to make it a permanent career.
16. My immediate supervisor is a good supervisor for my workgroup.

Table 2 (continued)

Median Responses

17. The performance appraisal used accurately rates my job.

18. Dissatisfaction with State employment would be reduced if the following existed:

a. Better health insurance
b. Longer vacations
c. Lower on-the-job pressures
d. More sick leave
e. A better retirement program
f. Less job discrimination
g. Better qualified co-workers
h. Higher quality of supervision
i. More opportunities for promotion
j. Other (please specify) _____
k. Other (please specify) _____

Percentages

19. Are you?

64.0 Female
36.0 Male

20. Are you:

3.7 American Indian/Native American
0.6 Asian or Pacific Islander
9.6 Black
0.6 Hispanic
85.4 White
0.3 Other

21. What is ynur educational level? (Indicate highest completed.)

0.7 Elementary school (grades 1-8)
3.7 Some high school or some technical training
15.1 Graduated from high school or GED (Graduate Equivalency Degree)
15.5 High school degree plus technical training or apprenticeship
30.2 Some college
17.8 Graduated from college (B.A., B.S., or other bachelors degree)
7.9 Some graduate school
9.1 Graduate degree (Masters, LL.B., Ph.D., M.D., etc.)

Percentages

22. Are you:

71.3 Married
28.7 Single

23. How old are you?

0.7 Under 20 years
28.8 20 years to less than 30 years
28.1 30 years to less than 40 years
18.3 40 years to less than 50 years
8.3 50 years to less than 55 years
9.0 55 years to less than 60 years
5.8 60 years to less than 65 years
1.1 65 years or older

24. How many total years have you been a State Government employee?

9.2 Less than 1 year
20.5 1 year to less than 3 years
41.1 3 years to less than 9 years
28.0 9 years to less than 30 years
1.3 30 years or more

25. When will you be eligible to retire voluntarily?

5.2 I'm eligible now
2.2 In less than 2 years
6.8 2 years to less than 5 years
85.9 5 years or more

THIS COMPLETES THE SURVEY. WE APPRECIATE YOUR COOPERATION IN TAKING THE TIME TO RESPOND TO THESE ITEMS. PLEASE ENCLOSE THIS QUESTIONNAIRE IN THE PREPAID POSTAGE, SELF-ADDRESSED ENVELOPE AND MAIL BEFORE MAY 15, 1981. THANK YOU.

statements their primary and secondary reasons for terminating State employement. As shown in Table 3, there was a wide range of responses to this question. There were, however, four primary reasons cited by terminated employees which exceeded a ten percent response. The rank order of these four reasons was: (1) Pay (26.7%), (2) Communication with boss (12.9%), (3) Merit not properly considered (10.6%), and (4) Found a better job (10.2%). The top five secondary reasons for termination reported were (1) Pay (20.3%), (2) Lack of promotion opportunities (13.8%), (3) Merit not properly considered (10.8%), (4) Communication with boss (10.8%) (note that items three and four are tied), and (5) Found a better job (10.3%).

TABLE 3
REASONS FOR LEAVING STATE EMPLOYMENT
TERMINATED EMPLOYEES

Question Number*	Question	Percent Primary Reason	Percent Secondary Reason
T 1.	participate in decision making	5.5	3.4
T 2.	pay	26.7	20.3
T 3.	leaving was voluntary	8.6	3.9
T 4.	had few close friends		0.9
T 5.	job training	1.6	1.7
T 6.	communication	12.9	10.8
T 7.	routine	1.2	5.2
T 8.	promotion	4.3	13.8
T 9.	merit	10.6	10.8
T 10.	job satisfaction	4.3	6.9
T 11.	better job	10.2	10.3
T 12.	community activities	1.2	2.6
T 13.	conflict with personal goals	5.1	4.3
T 14.	left for new job closer to home	3.9	3.9
	specified some other reason	3.9	1.3

*Question numbers correspond to survey Terminated Employee question numbers.

Reasons Current Employees Might Leave

The question discussed in the preceding section for terminated employees, but with a slightly different working, also appeared on the current employee questionnaire (Question 13). The primary reasons (exceeding a ten percent response) why current employees might terminate State employment were rank-ordered as follows (see Table 4): (1) Pay (56.0%), (2) Lack of promotion opportunities (12.1%), and (3) Merit not properly considered (10.3%). The secondary reasons why they might terminate were: (1) Lack of promotion opportunities (27.8%), (2) Merit not properly considered (18.7%), (3) Pay (16.0%), and (4) To take a better job (12.7%).

While it is obvious that pay is an issue with a number of terminated and current employees, it should also be noted that there are other relevant concerns. For example, while pay was rank ordered as a primary reason by approximately 27 percent of the terminated employees, 73 percent of the employees terminated for other primary reasons. Taken together

TABLE 4
REASONS MIGHT LEAVE STATE EMPLOYMENT
CURRENT EMPLOYEES

Question Number*	Question	Percent Primary Reason	Secondary Reason
C 1.	participate in decision making	3.2	5.0
C 2.	pay	56.0	16.0
C 3.	close friends	0.1	0.4
C 4.	job training	1.0	1.5
C 5.	communication	4.2	5.3
C 6.	routine job	1.5	2.3
C 7.	promotion	12.1	27.8
C 8.	merit	10.3	18.7
C 9.	job satisfaction	2.4	6.0
C 10.	better job	5.2	12.7
C 11.	community activities	0.8	1.8
C 12.	conflict with personal goals	2.7	2.3
	specified some other reason	0.4	0.1

*Question numbers correspond to survey Current Employee question numbers.

the issues of "merit" and "communications with the boss" accounted for 23 percent of the terminations within the last year. The importance of these reasons to the terminated employees are further substantiated by the secondary reasons identified for termination.

Fifty-six percent of the current employees indicated pay as being the primary reason they might terminate, but it should be noted again that a large number, 44 percent, would terminate for primary reasons other than pay with these reasons being nearly the same as those given by the terminated employees. It is interesting that a lack of promotion opportunity and merit were listed as the two most frequent secondary reasons current employees might terminate, while pay is listed as third. Therefore, while it is quite important, pay is not the only major source of dissatisfaction that may contribute to turnover. When other reasons are considered, they appear to overshadow the importance of pay for a majority of state employees.

Factor Analysis

While certain reasons why many employees terminate their employment with the State may be obvious, there may be common, underlying major sources of dissatisfaction and problems. In order to identify these sources of dissatisfaction, factor analyses of the responses of both terminated employees and current employees were performed. Factor analysis is a multivariate statistical technique which can be utilized to detect underlying relationships among a set of variables. Therefore, information contained in the large set of variables encompassed in each questionnaire can be summarized by smaller groupings of these variables called factors. It is generally accepted that this data-reduction capability makes factor analysis an appropriate technique for applications to problem situations such as the one investigated here. While a detailed presentation of the factor analyses is not within the scope of this paper, the results confirm the reasons for termination presented earlier.[7] A tentative interpretation and identification of factor dimensions common to both the terminated and current employee samples are presented in Table 5.

It is interesting to note that employees

TABLE 5
IDENTIFIED FACTOR DIMENSIONS

Terminated State Employee Responses		Current State Employee Responses	
FACTORS	FACTOR Descriptions	FACTORS	FACTOR Descriptions
I	Employee perception of low quality supervision combined with a dissatisfaction with the quality of work life	I	Employee perceived low quality supervision
II	Employee perceived lack of on-the-job career opportunity	II	Employee concerns for tenure
III	Employee perception of poor fringe benefits	III	Employee perception of poor fringe benefits
IV	Employee concern for tenure	IV	Employee perceived lack of on-the-job opportunity
IX	Employee concern for co-worker job competency	VII	Employee perceptions of a low quality of work life experience
		XI	Employee expression of low job satisfaction

from both populations share similar perceptions, especially where quality of supervision, quality of work life, fringe benefits, and career opportunity are concerned.

CONCLUSIONS

These research findings should have special relevance for policy makers in human resource management. There seems to be a number of reasons that State employees either have terminated or may terminate their employment. While pay appears to be quite important, it is not the only reason for termination cited by survey respondents. Given these employees are reported to be among the lowest paid nationwide, these other multiple reasons are rather surprising. While pay remains a consideration in reducing turnover, the implication is that pay may not be as significant as current employees say it is. When non-pay reasons are taken as a whole, they far overshadow the importance of pay for both terminated and current employees. Furthermore, there appears to be a significant difference between the extent pay is perceived to contribute to employee turnover and the relative extent that low pay actually does contribute to increased turnover.

The seven major causes of turnover, in no particular order of importance, as perceived by the employees and identified in this research are:

- Low quality of supervision
- A general dissatisfaction with the quality of work life
- Lack of career opportunity in State employment
- Lack of adequate fringe benefits
- Low pay in terms of salary
- Lack of job security (tenure)
- Lack of co-worker job competency

Assuming that labor market conditions remain constant in the long term and that employee-relations practices remain unchanged, turnover among State employees would be expected to continue at approximately the same rate. Given the basic character of reasons for turnover as identified by current

and terminated employees it appears essential that human resource policies should be modified. An important implication of these findings is that a substantial number of current employees who have marketable skills may take other jobs. It is quite possible these are the employees which the State most needs to retain.

A practical implication is that investments to reduce turnover should not be exclusively limited to take home pay. Investments in human resources should also be distributed in such a way that quality of supervision and of work life, employee promotion procedures, compensation, etc. are also improved. Such considerations may facilitate greater long term cost effectiveness, along with increasing benefits derived through improvement in the quality of supervision, merit based rewards, and other such practices that contribute to the quality of worklife.

Implicitly turnover has been viewed as symptomatic of numerous personnel problems, which taken singularly or collectively, provide the impetus for State employees to terminate. While this condition may be mitigated by unfavorable job market conditions (for employees), there are ample data analysis results to suggest that turnover will continue unless the detrimental effects of perceived low quality of supervision, quality of work life, etc. are improved. Given the associated costs of turnover, and need for high performing State employees, it seems prudent that efforts be extended to remove as many of the possible turnover causes as possible. Such actions would be both cost effective and sound investments in human resource management.

---

[1]This research was partially funded by the Inter-Governmental Personnel Act, project No. 80ARO4D, and the State of Arkansas.

[2]Christopher, Forrest et al., "Turnover Theory and Research," *Proceedings, Academy of Management*, 1973, pp. 338-43. John Newman, "Predicting Absenteeism and Turnover," *Journal of Applied Psychology*, 59, (1974), pp. 610-15. Lyman Porter and Richard Steers, "Organizational, Work, and Personal Factors in Employee Turnover and Absenteeism," *Psychological Bulletin*, 80, 2, (1973), pp. 151-76.

[3]Glueck, William F., *Personnel: A Diagnostic Approach*, Dallas, Texas: Business Publications, Inc., 1978.

[4]Stumpf, Stephen A. & Patricia Dawley, "Predicting Voluntary and Involuntary Turnover Using Absenteeism and Performance Indices", *Academy of Management Journal*, 24, 1, (1981), 148-163.

[5]Lefkowitz, Joel and Myron Katz, "Validity of Exit Interviews," *Personnel Psychology*, 22, (1969), pp. 445-55. John Hinrichs, "Measurement of Reasons for Resignation of Professionals: Questionnaire versus Company and Consultant Exit Interviews," *Journal of Applied Psychology*, "60, 4, (1975), pp. 530-32.

[6]Martin, Thomas N. Jr., "A Contextual Model of Employee Turnover Intentions," *Academy of Management Journal*, 22, 2 (1979), 313-324.

[7]Details of the factor analyses may be obtained from the authors.

ARKANSANS AND THE USURY LAW IN 1982

Robert L. Savage
Professor of Political Science
University of Arkansas, Fayetteville

Diane Blair
Assistant Professor of Political Science
University of Arkansas, Fayetteville

INTRODUCTION

In 1974 and again in 1980, Arkansas voters rejected proposals that could have led to increases in the ten percent usury limit established in the State Constitution. In the earlier year, with nearly a half million people casting their votes on the issue, more than 86 percent voted against the proposition, while in the later year with nearly 750,000 voters, 56 percent voted **no.** Certainly, in the six-year period, a considerable movement **away from support** of the existing constitutional provision is evident. Moreover, the opinion survey evidence reported by Britton and Savage suggests, although it does not confirm, that a majority of Arkansans were actually opposed to the existing limitation.[1] Yet, with all the evidence pointing to the problems created by a fixed, ten percent limit on interest rates, a majority continued to reject a change in 1980. Why, then, did the voters reject the proposition in 1980? And more pertinently, is there any reason to believe that voters will support a revised usury-limit proposition if placed before them at the 1982 General Election?

BACKGROUND AND ANALYSIS

The rejected proposals in both 1974 and 1980 would have taken the control over the usury limit from the voters, through the constitutional ratification process, and placed that power in the State Legislature. Under both propositions, the ten percent limit would have remained in effect until the Legislature enacted a change by a simple majority in the 1974 provision or by a two-thirds vote in the 1980 proposition. The naysayers' objections, often voiced in the media and in public meetings during those campaigns, strongly suggest that the absence of any fixed limit to govern legislative decision-making was the crucial dissuading factor. There is strong evidence that in 1980 Arkansans generally had little confidence in the Legislature.[2] Indeed, the real surprise in the 1980 election may well have been that 44 percent of the voters were willing to lodge the decision in that body at all.

A recent statewide survey by the authors shows only a marginal improvement during the past two years in the confidence that Arkansans place in the Legislature.[3] In April 1982, only 7.5% indicated a "great deal of confidence," 65.4% exhibited "only some confidence," and 26.4% felt "hardly any confidence." The comparable figures for March, 1980, in a similar survey were 7.3%, 61.1% and 31.6% respectively.

While the authors' survey did not question the respondents directly about their support for the upcoming ballot proposition, it did ask them generally about revising the Arkansas usury limit. As shown in Table 1, just over 43 percent of Arkansans want to keep the limit at 10% or even reduce it, while more than 55 percent want to modify (or eliminate) the usury limit so as to be more consistent

TABLE 1
ARKANSANS' OPINIONS ON REVISION OF THE STATE'S USURY LIMIT

Issue Position	%Responding*
Revise to less than 10%	9.2
Kept at 10%	34.0
Over 10% to 15%	25.8
Over 15%	3.6
Tied to an index	16.6
Eliminate usury limit	9.4
No response	1.3
Total	99.9**

*Sample size=523.
**Varies from 100.0% due to rounding.

with contemporary economic conditions.

If the 1982 proposition lodged the decision with the State Legislature, as was the case in the earlier proposed constitutional amendments, then its prospects for adoption would be only slightly better than in 1980. The proposition that will be placed on the ballot this Fall, however, will maintain a constitutionally-fixed ceiling on consumer loans and credit sales, although increased to 17%. Interest rate ceilings on other loans would be tied to the Federal Reserve discount rate.

Casual observation of Table 1 might lead to the conclusion that the 1982 ballot proposal has little chance of adoption. After all, only those respondents who want a fixed rate of more than 15%, who want to tie the ceiling to an index, or who accept elimination of the usury limit altogether are clearly likely supporters, not quite 30 percent of the respondents. Still, a majority of the respondents exhibited a recognition of the existing problem by their desire to increase, eliminate, or make more flexible the existing usury law.

However, the actual distribution of opinion on the question is so pluralized that a strong education campaign on the issue will likely be necessary if the measure is to carry. The necessity for such a campaign is all the more evident given the relative complexity of the ballot proposition.

SUMMARY AND CONCLUSIONS

In summary, our survey results suggest that the majority of Arkansans likely consider the present constitutional provision archaic, but Arkansans are overwhelmingly (more than 72% of them) wedded to a fixed interest ceiling. Since the 1982 proposition establishes a **fixed** rate for those kinds of loans that are of more interest to most voters and otherwise resorts to an index, a majority of voters may support the measure. Moreover, given what appears to be the reluctance of voters to let the State Legislature decide interest limits, the fact that unlike its predecessors, the 1982 proposition confers no such authority, may further enhance the possibility of a positive response by Arkansas voters.[4]

[1]Charles R. Britton and Robert L. Savage, *Popular Perceptions of Banks among Arkansans: Explorations in Institutional Imagery* (Fayetteville: Bureau of Business and Economic Research, University of Arkansas, 1981), pp. 90-95; and their "Popular Perceptions of Financial Institutions and the Usury Question in Arkansas," *Arkansas Business and Economic Review*, in press.

[2]See Robert L. Savage and Charles R. Britton, "The Question of Public Confidence: Arkansas and the Nation," *Arkansas Business and Economic Review*, 13 (Winter, 1980), 20-23.

[3]The authors were project directors of a statewide survey on "Political Ideology and Public Confidence" conducted by the AHRP in April, 1982. The survey queried Arkansans on a wide array of policy issues of which the usury limit was only one. Similarly, their confidence in a number of institutions, private and public, and not just the State Legislature, was probed. The response rate to the statewide mail survey exceeded 60%, a very acceptable rate.

[4]Examination of the demographic characteristics of our survey introduced one imponderable, however. While the respondents are only marginally different in most regards from the likely voting population in the state, only 4.6% of the sample are non-whites. Black Arkansans, who constitute 16.3% of the population, could conceivably play an especially critical role in the election.

FINANCIAL INSTITUTION STRUCTURE AND ECONOMIC DEVELOPMENT IN ARKANSAS

Charles Venus, Ph.D.
Economic Consultant

Arkansas has long been recognized as a low income, relatively capital-poor state that required substantial capital inflow to drive its economic development efforts. Insofar as manufacturing plants are concerned, it has also been recognized that neither the lack of native capital nor the restrictive usury provision have substantially hampered industrial growth, although industrial financing programs have been necessary competitive tools.

Capital availability for native investment and infrastructure development has been another matter, however, and through the years has received considerable discussion.[1] And a part of that discussion has generally referenced the relatively large number of small financial institutions in the State—banks, savings and loan associations, and credit unions—that were neither financially nor managerially prepared, even if they could legally, to finance the investments **really** needed to allow "Arkansans" to contribute to and participate in a more accelerated pace of economic development.

While it was argued that correspondent banking relations served to satisfy these needs and that Small Business Investment Corporation could be used to provide capital for more risky investment, it was still obvious that Arkansas' limited bank branching laws and its anti-bank holding company law (1971) served to retard the development of larger financial institutions. It now seems that the national movement toward financial institution deregulation will accomplish rather quickly the restructuring of Arkansas' financial institutions, led by the savings and loan industry.

THE S & L MERGER MOVEMENT

Adversity and deregulation have recently combined to produce a rash of savings and loan association mergers. From a peak of 76 separate S & L associations in 1979, there were some 67 in 1981, and, with the approval of just the **pending** applications, there may be only 47 very soon. Indeed, it seems likely that Arkansas will have twenty or fewer associations by as early as 1985, most of which will be regional or statewide, if not affiliates of interstate institutions. And, apparently, they will be indistinguishable from commercial banks in range of service, operations, and regulation.

The pattern of mergers has been set by those aggressive institutions that started early—Firstsouth of Pine Bluff and First Federal of Little Rock—both of which have all but completed statewide systems. Tables I and II present approved and pending mergers as of July, 1982. Table III and Figure 1 show the geographic distribution of the combined institutions for the major systems being put in place.

S & L BRANCHING PATTERNS

The merging of S & L associations tends to create wide geographic coverage because the existing branch structures of the institutions remain as facilities of the new association. At the same time the larger S & L's have also been "de novo' ing" new branches, particularly in

communities where only one association is located.

As opposed to the banks which are restricted, with very limited exceptions, to branching within the corporate limits of the municipality of their domicile, the S & L's have wide and lenient branching authority. Some years ago each was limited to branching within 100 miles of its home office but now may branch anywhere in the State. More importantly, regulatory authorities view S & L branching as a "business decision" that no longer requires proof of "public need." The only defenses for protesting branches are an inadequate capital base or a high potential of **undue** harm to another institution. Neither defense is very likely to succeed. S & L's may also have mobile and storefront branches which can be low cost deposit generators.

RELATIVE SIZE OF S & L'S AND BANKS

The merger activity is also realigning the size ranking of Arkansas' financial institutions, a listing wherein the banks have always been dominant. Assuming that pending mergers had been completed at the beginning of 1982, Arkansas' S & L's and banks would have ranked as follows:

Institutions	Approximate Size (millions)*
First Federal S & L, Little Rock	$763
First Arkansas Bankstock Corp., Little Rock	720
First Commercial National Bank, Little Rock	593
Firstsouth S & L, Pine Bluff	443
Savers Federal S & L Little Rock	388
First Federal S & L, Fort Smith	363
Union National Bank, Little Rock	306
Superior Federal S & L, Fort Smith	296

*Total Deposits for Banks, Savings Deposits for Savings and Loans, year end 1981.

SO WHAT OF THE BANKS?

As deregulation continues, whatever number of S & L's remain will apparently become commercial banks, and there is current discussion of S & L-Bank mergers. So no one really knows what the structure of financial institutions will look like some years hence.

As of early 1982 there were 262 banks with 681 "facilities" (operating locations, including branches and main offices) in Arkansas. The "structure" included one registered bank holding company, First Arkansas Bankstock Corporation (FABCO) which was grandfathered in by the 1971 law that outlawed others. FABCO owns Worthen Bank, First National Bank of Hot Springs, First National Bank of Mena, and Stephens Security Bank and a multitude of one-bank holding companies that own single banks. Also, there is the pending merger of Commercial National Bank of Little Rock and First National Bank of Little Rock which will create the second largest financial institution in Arkansas—about $600 million in deposits.

Since the banks are severely limited, compared with the S & L's, by the branching restrictions and the anti-registered bank holding company legislation, it will be interesting to see how the bankers will react to the rapidly changing structure of the savings and loan associations. Certainly the banks will experience growing competitive disadvantages as they face a few statewide or interstate S & L's (banks to be), to say nothing of all the other new competition coming from Sears and Merrill-Lynch

for example. One would expect new banking legislation in the 1983 general session if the bankers can decide what they want to do.

IMPLICATIONS FOR ECONOMIC DEVELOPMENT

In any case, by the late 1980's we should be able to test the theories that fewer and larger financial institutions can contribute more to financing economic development in Arkansas. Certainly interest rates must come down considerably, or the usury law changed, to make any such test meaningful. But the results of the national thrust to deregulate financial institutions seems sure to remove another barrier to increasing employment and income opportunities in Arkansas. At least we will find out if the barrier was real.

[1]Economic Expansion Study Commission, *Accelerating Economic Growth in Arkansas*, Little Rock, October 1, 1964, and Arkansas Economic Development Study Commission, *Arkansas' Economic Development, A Design for Future Growth*, Little Rock, October 1, 1976. Both of these were "blue-ribbon commission" studies completed for the legislature and Governor, but are only exemplary of numerous other studies and recommendations.

TABLE 1
COMPLETED S & L ASSOCIATION MERGERS IN ARKANSAS AS OF JULY, 1982

Remaining Institutions	Merged Institutions
1. Firstsouth Federal Savings, Pine Bluff	Capital Savings, Little Rock; First Federal, Magnolia Arkansas Valley Savings, Russellville; Union Fidelity Savings, El Dorado; Security Savings, Camden; First Federal, Helena
2. Independence Savings, Batesville	Northwest Savings, Rogers; White County Savings, Searcy
3. Savers Federal Savings, Little Rock	Guaranty Savings, Pine Bluff; First Federal, Russellville
4. Superior Federal Savings, Fort Smith	Commonwealth Federal Savings, Little Rock

Source: Federal Home Loan Bank

TABLE II
PENDING S & L ASSOCIATION MERGERS IN ARKANSAS AS OF JULY, 1982

Remaining Institutions	Merged Institutions
1. First Federal Savings, Little Rock	United Peoples Federal, Fort Smith; First Federal, Stuttgart; American Federal, Helena; Southwest Federal, Prescott; First Family Savings, Heber Springs South Arkansas Savings, Pine Bluff; Heritage Federal Savings, Fayetteville American Savings, Springdale
2. First Federal Savings, Fort Smith	Standard Federal Savings, Fort Smith; Benton County Savings, Bentonville;
3. First Federal Savings, Fayetteville	Liberty Savings, Siloam Springs
4. Firstsouth Federal Savings, Pine Bluff	First Community Federal, Arkadelphia; First Federal Savings, Hope; Marianna Federal Savings, Marianna; East Arkansas Savings, West Memphis; Batesville Federal Savings, Batesville; First Savings, Warren
5. Independence Savings, Batesville	Washington Savings, Springdale
6. Superior Federal Savings, Fort Smith	First Federal Savings, Morrilton
7. United Federal Savings, Jonesboro	Piggott Federal Savings, Piggott

Source: Federal Home Loan Bank

TABLE III
THE TOP FIVE SAVINGS AND LOAN ASSOCIATIONS, AND THEIR BRANCHES, IN ARKANSAS AS OF JULY, 1982*

Remaining Institutions	Merged Institutions and Branches
1. Firstsouth Federal Savings, Pine Bluff	Capital Savings, Little Rock; First Federal, Magnolia; Arkansas Valley Savings, Russellville- Branches: Atkins, Dardanelle; Union Fidelity Savings, El Dorado; Security Savings, Camden; First Community Federal, Arkadelphia- Branches: Glenwood, Gurdon, Murfreesboro; First Federal Savings, Hope- Branch: DeQueen; First Federal Savings, Helena; Marianna Federal Savings, Marianna; East Arkansas Savings, West Memphis; Batesville Federal Savings, Batesville- Branches: Fairfield Bay, Highland, Melbourne, Mountain View First Savings, Warren
2. Savers Federal Savings, Little Rock (C on map)	Guaranty Savings, Pine Bluff; First Federal Savings, Russellville- Branches: Clarksville, Dover
3. First Federal Savings, Little Rock (A on map)	United Peoples Federal, Fort Smith- Branch: Van Buren; First Federal, Stuttgart- Branches: DeWitt, Hazen; American Federal, Helena- Branch: West Helena; Southwest Federal, Prescott- Branches: Gurdon, Nashville First Family Savings, Heber Springs- Branches: Clinton, Fairfield Bay; South Arkansas Savings, Pine Bluff- Branches: Lake Village, McGehee;

(continued on next page)

Table III continued

	Heritage Federal Savings, Fayetteville- Branch: Rogers;
First Federal Savings Little Rock continued	American Savings, Springdale- Branches: Bella Vista, Berryville, Rogers, Huntsville, Lincoln
4. Superior Federal Savings, Fort Smith	Commonwealth Federal Savings, Little Rock; First Federal Savings, Morrilton- Branches: Conway, Russellville
5. First Federal Savings, Fort Smith	Standard Federal Savings, Fort Smith; Benton County Savings, Bentonville- Branches: Bella Vista, Rogers, Siloam Springs

*Assuming pending mergers are approved.

FIGURE 1

FINANCIAL INSTITUTION STRUCTURE AND ECONOMIC DEVELOPMENT IN ARKANSAS

ARKANSAS
★ – First Federal Savings, Little Rock
√ – FIRSTSOUTH, Pine Bluff
● – Savers Federal, Little Rock
■ – Superior Federal, Fort Smith
○ – First Federal, Fort Smith

THE GROWING NATIONAL DEBT: IS IT A CAUSE FOR CONCERN

Thomas R. McKinnon
Director, Bessie B. Moore Center
for Economic Education
University of Arkansas, Fayetteville

One consequence of current historically high budgetary deficits is a growing national debt. Topping a trillion dollars in late 1981, the national debt has more than doubled in the last eight years.[1] In recent years, it has been growing at an increasing rate, and current projections are that the trend will continue at least through the mid-eighties.

One popular radio commentator recently stated that when a new baby is born in the United States, he is immediately saddled with almost $5,000 worth of public debt and that the United States will surely go bankrupt if the trend continues. Evidence of wide-spread public concern is the growing support for a constitutional amendment requiring an annually balanced federal budget.

According to the *Economic Report of the President*, the national debt at the end of 1981 was 1,028.7 billions of dollars, an overwhelming sum by any measure.[2] However, to put it in perspective, private debt is approximately three times the size of the public debt and has grown much more rapidly during the past 20 years.[3] Actually the burden of a debt can be measured only in terms of one's ability to pay, and the national debt as a percent of GNP has declined from just over 120% in 1945 to 34% in 1981[4].

Much of the confusion concerning the national debt comes about because we tend to think of the public debt in terms of our own private debts. This is a classic example of the fallacy of composition and we should recognize that there are important differences between the two.

When one pays a private debt, there is a loss of assets and the individual is the poorer for it. However, since most of the national debt is held internally by United States citizens, its repayment would entail a transfer from the general public to holders of the debt, and there would be no loss of assets for the American economy. In 1979, 15.1% of the public debt was owned by foreigners and its repatriation would entail a net loss.[5]

Individual debts are contracted in terms of a limited life span with the maximum being forty years or so. The public debt has no such limitation and it can be refinanced into perpetuity. The practice of refinancing the debt has led to the common cliche that we are passing the burden of the debt on to our grandchildren. There is really no way that we can consume today what our grandchildren will be producing in the future. We can only consume what we are currently producing. Indeed, even though we pass on a financial obligation, we are also passing on securities so that future generations will receive income as well.

Even though we dismiss the dire warnings of the radio commentator as misguided sensationalism, there are reasons for concern about the national debt. While the debt is routinely rolled over, the interest on it is paid out of the federal budget each year. Interest on the national debt has become the third largest item in the budget, amounting to 82,527 millions of dollars in 1981.[6] Because the tax receipts used to pay the interest come from the entire population and the inter-

est payments go to holders of government securities, a substantial redistribution of income may be occurring. Since major holders of government securities tend to be from the upper income groups, levels and patterns of consumption are affected.

Of concern also is the financing of increases in the national debt. When the federal government enters into the money markets to finance such increases, it is competing with private investors for funds. If the money supply is not expanded to accommodate the increased demand, the government may crowd out private investors by driving up interest rates. To the extent that the increased government spending is for consumption rather than investment, the total level of investment is curtailed. If the money supply is expanded to accommodate the increased demand, inflation may occur.

The public debt could be retired overnight by a sufficiently large tax increase. Even the redistribution effects could be avoided by taxing the holders of the debt 100% of the value of their holdings. Such an eventuality is unthinkable, but, even if it were feasible, we would lose the benefits of maintaining a national debt. Government securities provide a relatively risk-free source of assets for, among others, individuals, retirement funds, and financial institutions. Without the public debt, a new source of such assets would be required. Monetary controls by the Federal Reserve System depend on the buying and selling of government securities in the open market, so an important tool for stabilization would not exist without the national debt. The national debt is a useful tool for policy implementation, but like all credit it must be used with care.

---

[1] *Economic Report of the President*, February, 1982, U.S. Government Printing Office, Washington, D.C., p. 325.

[2] Ibid.

[3] Byrns and Stone, *Economics*, 1981, Goodyear Publishing Company, Inc., p. 245.

[4] Op. cit.

[5] Byrns and Stone, p. 247.

[6] *Economic Report of the President*, p. 317.

SELECTED ARKANSAS AND U.S. ECONOMIC INDICATORS

	Page
Arkansas Economy: Q-I, 1982	39
Employment	40
Personal Income	41
Value Added by Manufacture	42
Cash Receipts from Farm Marketing	43
Activity of Arkansas Savings and Loan Associations	44
Waterborne Commerce: McClellan-Kerr Arkansas Navigation System	45
Residential Construction Contracts	46
Nonresidential Construction Contracts	47
Labor Force Estimates May 1982	48
Consumer Prices, June 1982	50

ARKANSAS ECONOMY: Q—I, 1982

Phillip H. Taylor
Director, Bureau of Business
and Economic Research
University of Arkansas, Fayetteville

Arkansas Personal Income grew less than one-half of one percent in the first quarter of the year. This was well below the rate of inflation so that, in the opening months of 1982, the real income of Arkansans declined again.

On a seasonally adjusted basis, Total Employment declined in Quarter I by 1.3 percent from the level achieved in the final quarter of last year. In the manufacturing sector, wage and salary employment was down by 10,000 workers from the same quarter in 1981 and in nonmanufacturing, the wage and salary employment declined by almost 15,000.

Estimated Value Added by Manufacturing moved upward during the quarter but this may largely reflect inflation and defects in the preliminary estimating methodology. Nevertheless, this indicator was 2.2 percent lower than its Quarter I, 1981 level.

Cash Receipts from Farm Marketings expanded sharply in the first three months of the year but were still $180 million below the peak level achieved in the third quarter of 1980. Moreover, when compared to the same quarters in prior years, the first quarter level was the lowest since 1978.

Activity of Savings and Loan Associations showed some improvement in the early months of the year in both total new loans and net new savings. However, during the same quarter, Residential Construction permits declined for the fifth consecutive quarter, reaching their lowest level since the first quarter of 1976. Nonresidential Construction rebounded by a healthy 21.1 percent.

Overall, the Arkansas economy appears to have "bottomed out" in the first quarter of the year, but there is little evidence currently available to indicate more than very modest improvement in the second quarter. However, with declining interest rates and early indicators pointing to a gradual recovery in the national economy, the second half of the year should see a gradual improvement in the State's economy.

Base Year to Date and Quarterly Changes in Total Employment, Arkansas and United States

Seasonally adjusted, percent. Base Year = 1967

	1967 thru 1982 Q-I	1981 Q-I thru 1981 Q-II	1981 Q-II thru 1981 Q-III	1981 Q-III thru 1981 Q-IV	1981 Q-IV thru 1982 Q-1
Arkansas	+ 40.0	+ 0.3	+ 2.7	+ 1.7	- 1.3
United States	+ 33.9	+ 0.4	- 0.1	- 0.6	-0.5

Employment by Major Industry Group in Arkansas, and Unemployment Rate, Arkansas and United States

Seasonally adjusted, units

TIME PERIOD	EMPLOYMENT				UNEMPLOYMENT RATE	
	Wage and Salary		Agricultural	Total	Arkansas	United States
	Manufacturing	Nonmanufacturing				
1975	175,500	444,500	61,000	776,700	9.5[R]	8.5
1976	187,300	445,100	65,600	794,000	7.1[R]	7.7
1977	208,900	483,400	62,800	837,700	6.6[R]	7.1[C]
1978	216,500	507,350	61,250	868,400	6.3[R]	6.1[C]
1979	217,750	526,700	65,800	904,000	6.2[R]	5.8
1980	210,050	540,400	65,100	896,200	7.6[R]	7.1[C]
1981	212,100	536,150	64,100	910,150	9.1[R]	7.6
1982, Q-I	199,550	523,820	64,600	922,470	8.8*	8.8

*Actual Rate. Effective January 1977 the Arkansas Employment Security Division revised its adjustment to employment data based on methods developed by the U.S. Bureau of Labor Statistics. As a result, the Arkansas unemployment rate cannot be seasonally adjusted at this time.
[R]Revised based on Arkansas Employment Security Division Computations.
[C]Revised based on data on page 12, July '82 issue, *Economic Indicators*.

PERSONAL INCOME

Base Year to Date and Quarterly Changes in Personal Income, Arkansas and United States

Seasonally adjusted, percent, Base year = 1967

	1967 thru 1982 Q-I	1981 Q-I thru 1981 Q-II	1981 Q-II thru 1981 Q-III	1981 Q-III thru 1981 Q-IV	1981 Q-IV thru 1982 Q-1
Arkansas	+ 347.8	+ 2.5	+ 3.7	- 0.1	- 0.4
United States	+ 299.0	+ 2.1	+ 3.1	+ 1.8	+ 0.7

Personal Income in Arkansas

Seasonally adjusted, millions of dollars

	1975	1976	1977	1978	1979	1980	1981	1982
Quarter								
Jan-Mar	2,070	2,508	2,837	3,118	3,698	4,002	4,451	4,742
Apr-Jun	2,373	2,667	2,948	3,208	3,681	3,975	4,560	
Jul-Sep	2,391	2,626	2,984	3,315	3,805	4,160	4,727	
Oct-Dec	2,368	2,676	3,070	3,406	3,929	4,265	4,722	
Annual	9,202	10,477	11,839	13,047	15,113	16,402	18,460	

VALUE ADDED BY MANUFACTURE

Base Year to Date and Quarterly Changes in Manufacturing, Arkansas and United States

Seasonally adjusted, percent, Base year = 1967

	1967 thru 1982 Q-I	1981 Q-I thru 1981 Q-II	1981 Q-II thru 1981 Q-III	1981 Q-III thru 1981 Q-IV	1981 Q-IV thru 1982 Q-1
Arkansas	+ 282.8	- 1.8	+ 1.1	- 4.3	+ 2.9
United States	+ 41.8	+ 0.5	- 0.7	- 3.5	- 3.1

Value Added by Manufacture in Arkansas

Seasonally adjusted, millions of dollars

	1975	1976	1977	1978	1979	1980	1981	1982	Not seasonally adjusted 1982
Quarter									
Jan-Mar	981.0	1,099.3	1,158.2	1,326.7	1,416.1	1,435.8	1,534.0	1,500.7	1,400.4
Apr-Jun	975.4	1,103.2	1,226.4	1,377.1	1,407.8	1,328.3	1,506.7		
Jul-Sep	1,009.3	1,134.7	1,234.1	1,344.0	1,369.4	1,325.2	1,523.6		
Oct-Dec	1,074.1	1,103.1	1,248. 6	1,325.7	1,362.1	1,374.7	1,458.0		
Annual	4,039.8	4,440.3	4,867.3	5,373.5	5,555.4	5,464.0	6,122.3		

CASH RECEIPTS FROM FARM MARKETING

Base Year to Date and Quarterly Changes in Cash Receipts, Arkansas and United States

Seasonally adjusted, percent, Base year = 1967

	1967 thru 1982 Q-I	1981 Q-I thru 1981 Q-II	1981 Q-II thru 1981 Q-III	1981 Q-III thru 1981 Q-IV	1981 Q-IV thru 1982 Q-1
Arkansas	+ 275.9	+ 3.9	+ 17.0	- 24.4	+ 18.0
United States	NA	+ 1.1	- 0.3	- 2.2	NA

Cash Receipts from Farm Marketings in Arkansas

Seasonally adjusted, thousands of dollars

Quarter	1975	1976	1977	1978	1979	1980	1981	1982	Not seasonally adjusted 1982
Jan-Mar	529,492	565,575	686,105	790,387	1,038,085	989,950	900,077	870,830	684,893
Apr-Jun	584,346	740,457	703,457	899,118	532,344	861,500	834,900		
Jul-Sep	609,324	621,624	578,357	721,275	835,030	1,054,950	976,620		
Oct-Dec	508,651	497,214	500,169	601,443	704,385	1,044,850	738,271		
Annual	2,231,831	2,425,367	2,468,088	3,012,223	3,231,844	3,951,250	3,449,868		

NA—Not Available

NONRESIDENTIAL CONSTRUCTION CONTRACTS

Base Year to Date and Quarterly Changes in Nonresidential Construction, Arkansas and United States

Not seasonally adjusted, percent, Base year = 1967

	1967 thru 1982 Q-I	1981 Q-I thru 1981 Q-II	1981 Q-II thru 1981 Q-III	1981 Q-III thru 1981 Q-IV	1981 Q-IV thru 1982 Q-1
Arkansas	+ 167.4	- 19.7	- 18.3	+ 33.8	+ 21.1
United States	+ 141.7	+ 17.2	+ 0.5	- 11.6	- 12.6

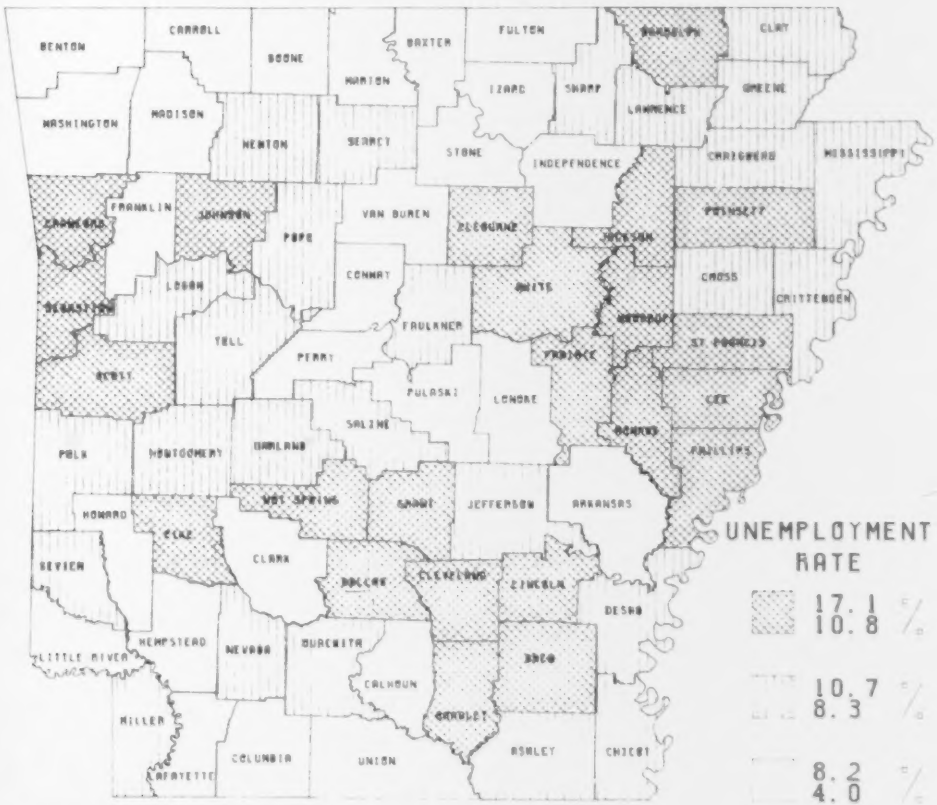
Nonresidential Construction Contracts in Arkansas

Not seasonally adjusted, thousands of dollars

	1975	1976	1977	1978	1979	1980	1981	1982
Quarter								
Jan-Mar	79,225	43,591	57,486	72,851	88,988	72,300	90,500	96,300
Apr-Jun	67,424	93,906	63,726	60,479	109,976	91,200	72,700	
Jul-Sep	45,566	67,913	67,632	90,471	70,296	91,900	59,400	
Oct-Dec	89,446	79,004	76,866	69,041	112,549	99,700	79,500	
Annual	281,661	284,414	265,710	292,842	381,809	355,100	302,100	

LABOR FORCE ESTIMATES
MAY 1982

IN MAY, ARKANSAS' CIVILIAN LABOR FORCE INCREASED BY 17,400 TO TOTAL 1,025,300. TOTAL EMPLOYMENT INCREASED 21,000 TO TOTAL 931,700. UNEMPLOYMENT FELL 3,600 TO TOTAL 93,600. OF THE 75 COUNTIES, MARION HAD THE LOWEST UNEMPLOYMENT RATE AT 4.0 PERCENT AND LEE, THE HIGHEST AT 17.1 PERCENT. MOREOVER, THE UNEMPLOYMENT RATES IN 38 COUNTIES EQUALLED OR EXCEEDED THE STATE RATE. FOR THE SMSAS, FAYETTEVILLE-SPRINGDALE HAD THE LOWEST UNEMPLOYMENT RATE AT 6.3 PERCENT AND FORT SMITH HAD THE HIGHEST AT 11.0 PERCENT. THE RATES FOR THE LITTLE ROCK - NORTH LITTLE ROCK AND THE PINE BLUFF SMSAS WERE 7.7 AND 10.2 PERCENT, RESPECTIVELY.



UNIVERSITY OF ARKANSAS
COMPUTER GENERATED MAP

LABOR FORCE ESTIMATES
May 1982, not seasonally adjusted

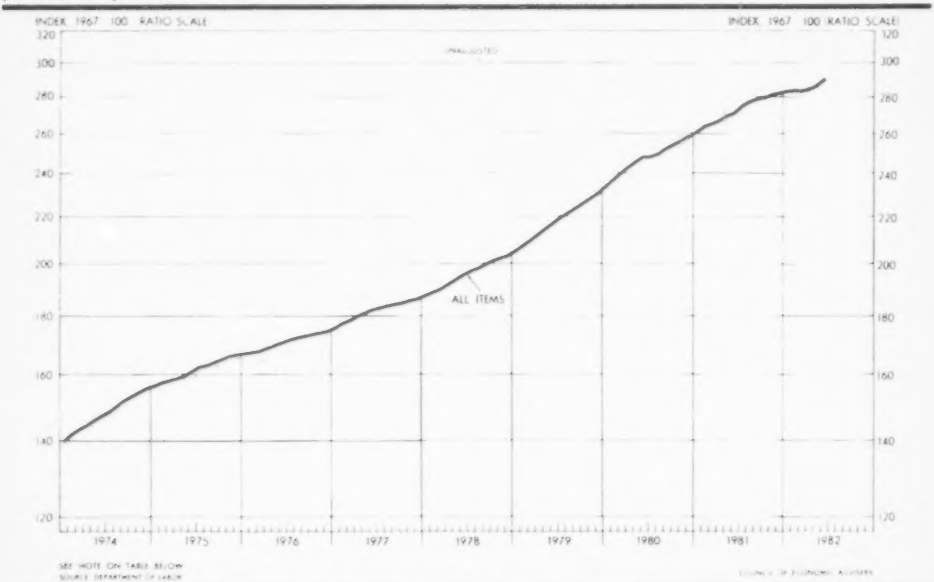
State and SMSA's	Civilian Labor Force	Unemployment Rate	Total Employment
UNITED STATES	109,914,000	9.1	99,957,000
STATE OF ARKANSAS	1,025,300	9.1	931,700
Fayetteville-Springdale SMSA (Benton & Washington Counties)	80,800	6.3	75,700
Fort Smith SMSA (Crawford & Sebastian Counties in Arkansas and LeFlore & Sequoyah Counties in Oklahoma)	87,100	11.0	77,500
Little Rock-North Little Rock SMSA (Pulaski & Saline Counties)	194,700	7.7	179,700
Pine Bluff SMSA (Jefferson County)	39,875	10.2	35,825

County	Civilian Labor Force	Unemployment Rate	Total Employment	County	Civilian Labor Force	Unemployment Rate	Total Employment
Arkansas	12,475	8.2	11,450	Lee	5,425	17.1	4,500
Ashley	11,400	10.7	10,175	Lincoln	4,275	11.1	3,800
Baxter	9,425	7.4	8,725	Little River	5,325	6.6	4,975
Benton	35,650	6.7	33,250	Logan	7,750	9.7	7,000
Boone	11,725	5.8	11,050	Lonoke	16,725	7.5	15,475
Bradley	5,025	15.4	4,250	Madison	6,025	7.5	5,575
Calhoun	2,400	7.3	2,225	Marion	6,175	4.0	5,925
Carroll	8,075	5.9	7,600	Miller	14,800	8.8	13,500
Chicot	7,300	9.2	6,625	Mississippi	26,100	10.1	23,475
Clark	10,775	6.5	10,075	Monroe	6,050	16.5	5050
Clay	9,375	10.4	8,400	Montgomery	3,075	10.6	2,750
Cleburne	6,475	11.2	5,750	Nevada	4,275	8.8	3,900
Cleveland	2,175	13.8	1,875	Newton	2,975	8.4	2,725
Columbia	13,900	6.5	13,000	Ouachita	12,500	10.2	11,225
Conway	8,550	6.7	7,975	Perry	3,200	7.0	2,975
Craighead	31,000	8.9	28,250	Phillips	13,975	12.7	12,200
Crawford	16,300	11.5	14,425	Pike	4,200	11.3	3,725
Crittenden	23,775	10.3	21,325	Poinsett	11,075	11.1	9,850
Cross	9,125	10.1	8,200	Polk	6,200	8.9	5,650
Dallas	4,075	11.0	3,625	Pope	19,600	10.6	17,525
Desha	8,100	8.6	7,400	Prairie	3,800	11.2	3,375
Drew	8,075	10.8	7,200	Pulaski	168,150	7.5	155,550
Faulkner	21,925	8.6	20,050	Randolph	6,950	14.7	5,925
Franklin	7,200	7.6	6,650	St. Francis	13,400	15.3	11,350
Fulton	2,750	8.2	2,525	Saline	26,550	9.0	24,150
Garland	29,500	9.6	26,675	Scott	3,525	13.5	3,050
Grant	4,475	12.3	3,925	Searcy	2,825	8.8	2,575
Greene	14,000	10.7	12,500	Sebastian	41,975	11.6	37,100
Hempstead	11,400	7.2	10,575	Sevier	6,000	9.2	5,450
Hot Spring	10,625	16.5	8,875	Sharp	4,325	8.7	3,950
Howard	7,800	5.1	7,400	Stone	3,425	7.3	3,175
Independence	16,375	7.9	15,075	Union	24,250	6.1	22,775
Izard	4,075	6.7	3,800	Van Buren	4,300	8.1	3,950
Jackson	9,525	15.7	8,025	Washington	45,150	6.0	42,450
Jefferson	39,875	10.2	35,825	White	23,175	11.5	20,500
Johnson	8,050	10.9	7,175	Woodruff	4,500	11.1	4,000
Lafayette	3,725	7.4	3,450	Yell	8,350	8.4	7,650
Lawrence	8,450	10.7	7,550				

Source: The Research and Statistics Section, Arkansas Employment Security Division.

CONSUMER PRICES

In June, the consumer price index for all urban consumers rose 1.0 percent, seasonally adjusted (1.2 percent unadjusted). Food and beverages prices were up 0.6 percent, seasonally adjusted, and energy prices were up 4.1 percent, unadjusted.



SEE NOTE ON TABLE BELOW
SOURCE: DEPARTMENT OF LABOR

(1967 = 100, monthly data seasonally adjusted, except as noted)

Period	All items [1] NSA	Food and beverages	Housing: Total [1]	Housing: Home purchase NSA	Housing: Financing, taxes, and insurance NSA	Apparel and upkeep	Transportation: Total [1]	Transportation: New cars	Transportation: Motor fuel [2]	Medical care	Energy [3] NSA	Services	All items less food, energy, and home purchase and finance [4]
Rel. imp. [5]	*100.0*	*17.5*	*46.0*	*9.6*	*12.9*	*4.6*	*19.3*	*3.5*	*6.0*	*4.9*	*11.1*	*43.2*	*19.8*
1974	147.7	158.7	148.8	142.7	181.1	136.2	137.7	117.5	159.9	150.5	159.7	152.1	138.5
1975	161.2	172.1	164.5	160.3	201.9	142.3	150.6	127.6	170.8	168.6	176.6	166.6	150.5
1976	170.5	177.4	174.6	168.4	212.8	147.6	165.5	135.7	177.9	184.7	189.3	180.4	160.8
1977	181.5	188.0	186.5	179.5	227.2	154.2	177.2	142.9	188.2	202.4	207.3	194.3	170.6
1978	195.4	206.3	202.8	196.7	257.8	159.6	185.5	158.8	196.3	219.4	220.4	210.9	180.9
1979	217.4	228.5	227.6	223.1	308.9	166.6	212.0	166.0	265.6	239.7	275.9	234.2	194.1
1980	246.8	248.0	263.3	254.3	386.0	178.4	249.7	179.3	369.1	265.9	361.1	270.3	211.6
1981	272.4	267.3	293.5	267.7	472.5	186.9	280.0	190.2	410.9	294.5	410.0	305.7	231.6
1981: June	271.3	266.0	291.6	266.6	467.2	186.1	276.9	192.0	406.5	292.0	414.0	303.3	230.3
July	274.4	267.7	296.3	271.4	480.0	187.1	276.7	192.8	404.3	295.9	415.7	308.6	232.6
Aug	276.5	269.1	299.3	272.6	488.3	188.4	281.4	192.8	404.7	299.4	416.1	312.2	234.4
Sept	279.3	270.9	303.2	274.5	501.8	189.0	284.6	193.7	408.3	302.0	417.1	316.9	236.5
Oct	279.9	271.5	303.3	272.5	501.8	189.5	288.2	194.0	414.6	305.0	414.9	318.4	238.3
Nov	280.7	271.9	304.8	270.2	505.6	189.3	290.8	194.6	418.1	308.3	414.1	321.4	239.8
Dec	281.5	272.1	305.9	270.5	506.3	189.4	292.5	196.1	420.3	310.5	414.6	322.9	241.4
1982: Jan	282.5	274.1	306.7	269.3	508.0	189.3	291.9	196.0	413.1	312.9	416.4	324.4	242.5
Feb	283.4	275.8	307.9	270.4	507.2	190.1	289.9	194.5	403.6	315.0	413.0	325.6	243.4
Mar	283.1	274.9	306.9	269.2	500.9	190.9	287.1	194.6	387.6	318.1	406.1	325.7	244.6
Apr	284.3	275.7	309.5	272.3	508.4	191.1	282.6	196.0	361.8	321.3	395.7	328.7	246.1
May	287.1	277.8	313.7	279.3	516.2	191.0	283.8	196.5	365.1	324.2	402.1	331.8	247.0
June	290.6	279.6	316.8	285.6	521.8	191.2	289.7	197.9	384.7	327.1	418.6	334.5	248.7

[1] Includes items not shown separately.
[2] Includes direct pricing of diesel and gasohol beginning September 1981.
[3] Fuel oil, coal, and bottled gas, gas (piped) and electricity, and motor fuel, motor oil, coolant, etc.
[4] Estimated series. Finance includes financing, taxes, and insurance.
[5] Relative importance, December 1981.

Note.—NSA indicates data are not seasonally adjusted.
Data beginning 1978 are for all urban consumers; earlier data are for urban wage earners and clerical workers.

Source: Department of Labor, Bureau of Labor Statistics.

ACTIVITY OF ARKANSAS SAVINGS AND LOAN ASSOCIATIONS

Base Year to Date and Quarterly Changes in Activity of Arkansas S & L Associations

Not seasonally adjusted, percent, Base year = 1967

	1967 thru 1982 Q-I	1981 Q-I thru 1981 Q-II	1981 Q-II thru 1981 Q-III	1981 Q-III thru 1981 Q-IV	1981 Q-IV thru 1982 Q-1
Total New Loans	+ 22.4	- 5.6	- 24.3	+ 2.3	+ 26.4
Net New Savings	- 32.0	+ 191.6	+ 6.6	+ 289.9	- 5.4

Economic Activity of Arkansas Savings and Loan Associations

Not seasonally adjusted, Thousands of dollars

TIME PERIOD	TOTAL NEW LOANS		NET NEW SAVINGS	
	Current $	1967 $	Current $	1967 $
1975	413,366	255,678	309,304	192,119
1976	606,400	355,280	393,300	231,050
1977	815,800	448,590	405,000	223,492
1978	729,300	373,700	416,900	213,610
1979	625,900	290,560	436,830	204,525
1980	504,700	204,275	287,600	115,580
1981	360,800	132,970	20,000	7,240
1982 Q-I	102,600	36,250	36,900	13,040

WATERBORNE COMMERCE:
McCLELLAN-KERR ARKANSAS RIVER NAVIGATION SYSTEM

Base Year to Date and Quarterly Changes in Total and Internal Tonnages

Not seasonally adjusted, percent, Base = Ave. Qtr. 1971

	1967 thru 1982 Q-I	1981 Q-I thru 1981 Q-II	1981 Q-II thru 1981 Q-III	1981 Q-III thru 1981 Q-IV	1981 Q-IV thru 1982 Q-1
Total	+ 174.8	+ 10.6	+ 10.2	- 9.1	+ 6.1
Internal	- 69.4	+ 16.9	+ 7.4	- 20.9	- 52.6

Freight Traffic
Arkansas River Commerce

Not seasonally adjusted, Thousands of short tons

TIME PERIOD	TRAFFIC TONNAGES*			
	INBOUND	OUTBOUND	INTERNAL	TOTAL
1975	1,440	870	2,465	5,204
1976	1,988	1,663	3,033	7,078
1977	2,841	2,339	3,463	9,138
1978	2,595	3,899	3,170	10,216
1979	2,026	3,456	2,932	8,926
1980	1,611	4,643	2,408	9,133
1981	1,564	5,684	1,741	9,446
1982 Q-I	372	1,687	186	2,505

*Total tonnage includes "through traffic"—shipments which originate and terminate outside the Arkansas River Commerce Area.

RESIDENTIAL CONSTRUCTION CONTRACTS

Base Year to Date and Quarterly Changes in Residential Construction, Arkansas and United States

Not seasonally adjusted, percent, Base year = 1967

	1967 thru 1982 Q-I	1981 Q-I thru 1981 Q-II	1981 Q-II thru 1981 Q-III	1981 Q-III thru 1981 Q-IV	1981 Q-IV thru 1982 Q-1
Arkansas	+ 97.6	+ 9.7	- 15.1	- 7.6	- 23.6
United States	+ 118.3	+ 28.0	- 15.1	- 20.8	- 12.9

Residential Construction Contracts in Arkansas

Seasonally adjusted, thousands of dollars

	1975	1976	1977	1978	1979	1980	1981	1982	Not seasonally adjusted 1982
Quarter									
Jan-Mar	84,388	116,379	160,861	220,739	205,119	144,050	176,180	115,590	106,500
Apr-Jun	85,740	117,164	173,558	236,915	153,917	137,600	159,750		
Jul-Sep	98,557	122,732	182,210	227,633	193,364	177,450	138,360		
Oct-Dec	104,656	134,927	217,222	236,718	154,130	185,450	158,510		
Annual	373,441	491,202	733,851	922,005	706,530	664,550	632,800		